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# PERSPECTIVES for ERS

THE FIRST YEAR

APPRAISAL,  
OUTLOOK.

+30

2b  
WASHINGTON-FIELD STAFF

CONFERENCE

2b  
Airlie House,  
near Warrenton, Va.

June 10-13, 1962

2a  
Economic Research Service, +2b

2 U.S. DEPARTMENT OF AGRICULTURE

**PROGRAM AND ARRANGEMENTS COMMITTEE:**

**Carl P. Heisig, Chairman**

**Wilhelm Anderson**

**S. J. Dorick**

**Kenneth L. Bachman**

**Charles F. Kiefer**

**Kenneth E. Ogren**

**Hugh L. Stewart**

**Robert M. Walsh**

**Frederick V. Waugh**



RS NATIONAL CONFERENCE  
WARRENTON, VIRGINIA  
JUNE 10-13, 1962



F O R E W O R D

These are the proceedings of the first national conference of the Economic Research Service. They have been carefully reviewed and edited. It has not been practical nor feasible to include everything that was said. Our purpose in making them available within the Service is not only to refresh the recollections of those of us who were present at Airlie in June 1962, it is also to provide the members of the Service who were not present a sense of the content and direction of the discussions and of the excellence and range of the several presentations.

Perhaps most important to the critical reader, however, is the impression that comes through of a more unified research enterprise which has begun anew in the Economic Research Service. It is now more apparent to me that the whole of our efforts can and must be greater than the sum of our individual efforts.

The supply of these proceedings is limited and should, therefore, be shared most widely among our coworkers who were not present and especially among the newer and younger members of the staff who will advance their training -- on-the-job -- by a reading of these pages.

I congratulate the Arrangements Committees of the Economic Research Service and Management Operations Staff and all who helped to make this first conference a success. All of us are thankful to our friends in the Agricultural Research Service, Agricultural Stabilization and Conservation Service, Foreign Agricultural Service, Federal Extension Service, Staff Economist Group, Statistical Reporting Service, and Bureau of the Budget who contributed a great deal to the program discussions. Particularly are we appreciative to Willard W. Cochrane who supported this conference effort, and to Charles S. Murphy, Under Secretary of Agriculture, who challenged us anew to become even more useful in the service of American agriculture.

*Nathan M. Koffsky*  
Nathan M. Koffsky  
Administrator



ECONOMIC RESEARCH SERVICE  
Washington-Field Staff Conference  
Airlie House, Warrenton, Va.  
June 10-13, 1962

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OPENING COMMENTS

Nathan M. Koffsky, Administrator:

The first national conference of ERS is now in session. We are going to look at the total program of ERS, at the interrelationships within the program, and discuss the consistency of direction and the longer-run goals of ERS.

(After a period of introductions)

Carl Heisig is going to tell us a few of the rules of the conference and make some announcements, and then I'll be back.

PLANS FOR THE CONFERENCE

Carl P. Heisig, Deputy Administrator, Agricultural Economics:

I'll just take a few minutes. Nate has indicated the purpose of the conference. The program committee was composed of the five division directors, Charlie Kiefer, Bob Walsh, and myself as chairman. In trying to develop this program we did have in mind, of course, the objectives of such a conference as this: (1) to get acquainted with each other and get better acquainted with the program of ERS; (2) to stimulate thinking and discussion on where we are, where we are going or should be going, and then how we can operate most effectively and also cooperate among ourselves. The program is designed to provide an opportunity to accomplish these kinds of objectives. This is a full program, as you have been aware since you saw it. Even so, the committee had to omit a lot of ideas that were suggested to it.

There are probably three ingredients of a successful conference: (1) a proper environment, and the Airlie surroundings will provide that, you will agree; (2) to get mental stimulation, and we have tried to provide a list of speakers and panel members to provide that; and (3) getting discussion. This one is up to you individually. I hope that you will take part in the discussions and not hold back on any questions, comments, or constructive criticism.

We have set up a program for the first morning to get off to a good start. We have four distinguished speakers, beginning with the Administrator. This, I believe, will provide the mental stimulation. Then we have a number of panel discussions that, you will see, are dealing with specific problems. We have provided space for each of the five divisions to give a brief presentation of their program and to permit you to raise questions and make suggestions on improvement. We also have a few special features beginning with the program tonight that will provide an opportunity to get a look at how we can contribute to policy determination through the Staff Economist Group and then into the Secretary's Office. We have the banquet tomorrow night at which the Under Secretary will be the main speaker. Finally, there will be Bush Allin's talk on Wednesday noon at the luncheon.

Koffsky:

As Carl has said, this is not a spectator's sport today, or the rest of the week. What we are interested in is getting your critical comments about our program and to think about your own piece in this work and how this relates to the total. You know it's fashionable in the theory of organization to talk about the establishment, the establishment being the identification of a relatively few people who run an organization. I would have you know that in ERS all of us are the establishment and no man in ERS is an island. So all of us together should be thinking about all phases of the total effort.

Those of you who saw the preliminary program noted that Willard Cochrane was scheduled to deliver an address. Will has been sent off by the Administration to the Common Market for some 5 weeks to try to negotiate with the various countries better terms for agricultural products than we seem likely to get at this moment. But he instructed me to speak to you on his behalf.

Those of you who know Will Cochrane know that I cannot speak to you in the same way he does. You lose something in the translation. But he did ask me to tell you of his high regard for the Economic Research Service and that this organization, which now covers really the whole spectrum of economics for the Department of Agriculture, in his view is working very well. He has a high and I would say a growing regard for ERS. I feel, and I am sure Cochrane feels, that in many ways the glory that was attributed to the old BAE does in fact begin to exist in these two organizations. We hear very fine things from all of the Administration and from the outside now in terms of the capabilities and the kind of work we are doing.

Let us look ahead a little. I want to suggest some developments which I think are beginning to shape the course of our direction. First, I would say that research is now being used as a tool for decision more than ever before. Those of you who work in Washington know this. We have in recent times, and by recent times I mean just

the past few days, done a considerable amount of work to help solve specific problems. For example, Norris Pritchard here has done a lot of work on storage costs which is a very large problem today. Just before we left on Friday we were asked by CCC where were the most efficient places to ship grain out of U.S. ports. We have been asked in the last few days, is land reform in South America really necessary? We have been asked in the last few days by the Secretary's Office to make a review of the Forest Service projections because the Forest Service has a very large and expensive program on increasing the resources in forestry.

ERS stands as an impartial research agency to do this kind of analysis. We have done a report on the experience of payment-in-kind and cash subsidy programs for CCC grain exports, and whether or not the Government should operate these export programs directly. We have been asked, how much would it cost CCC, for example, to support egg prices at a certain level for the next few months? We have been asked, should the cotton loan which ordinarily closes off on August 1 for the 1961-62 crop be extended and what would be the results of this? So you see we are being asked questions which have a great deal of bearing on the day-to-day operations here. This sometimes goes beyond research. Nor is the Secretary's Office satisfied with just a passive answer to a question. In a sense they want us to formulate what are the real questions involved and what are the alternatives, and how do we weight out these alternatives?

Now there is a danger in this -- getting too close to operations. But it is essential and it needs to be done. The one thing that you do need to keep in mind is that in answering requests of this kind, the result is not far behind the research. The consequences of it happen quickly, in many instances, so that this really puts pressure on us to be accurate, to improve our basis for doing the analyses, and to be as sure as we can that we have enough facts and enough research to provide a reasonable answer.

Now that is one thing -- this use of research as a tool for decision. Another influence is the shift in agricultural policy. As you know, for the last 7 or 8 years we have had a rather uneasy balance in our farm program -- I would say an uneasy balance with respect to maintaining prices of farm products. If you look back over the last 7 or 8 years you notice that the price level has been held fairly stable within a plus or minus 4 percent, which is stable for agriculture. This has been accomplished only by increasing Government outlays for price supports.

The time has come where there will be some shifts. The Administration has come forward with proposals to tighten up on the management of supply. We see here a real shift in agricultural policy. The bill has passed the Senate and will be debated in the House either the end

of this week or early next week. I think the decision must be made. We cannot exist too much longer in this half controlled state. The people are rebelling against the increasing Government expenditures for agriculture with no end in sight. A beginning has been made in the emergency feed grain act and in the wheat legislation under which we are operating this year. But we must recognize that a determined effort is underway now to bring a tighter direction to our Government program. This puts a heavy burden on the Economic Research Service to develop the kind of analyses which give us the consequences of these actions and to point out as we go along such weaknesses as may arise and the different routes of correcting those weaknesses. Much is at stake and it is important that we do our work well.

The third major influence, as I see it, is the changing character of agriculture itself. Those of you who have looked at the results of the last census have been amazed, just as I have been, at the rapid change in agriculture -- the rapid decline in numbers of farms and the rapid decline in farm population. You have noted that the farm population has declined to something less than 15 million people as of 1961. One of the things here is that agriculture and the people seem to be polarizing in two directions. One, we have the commercial farm -- and I don't define the commercial farm here as it's defined in the census -- I take commercial agriculture. These are the farms that produce annually \$5,000 or more of products. There are about a million and a half of them, and they provide some 87 percent of all the farm products sold. For these farms, most of their income is from agriculture. They get about \$3 from the farm for every dollar they get from off the farm. They are oriented for the commodity price program and income support program. Then take the other group, and these are the other  $2\frac{1}{4}$  million farms that provide only about 13 percent of total products sold. For these farms, for every dollar of cash farm income there are \$5 of off-farm income.

So it is clear that there is a necessity for two directions of research. One direction is concerned with commercial agriculture, and much of our work has been oriented in this direction. Much of it relates to the consequences of specific actions on prices of farm products and income in agriculture. But we have here in this other group the challenge of a much wider world moving beyond traditional agricultural economics, growing into the field of economics in general and other disciplines. We increasingly need to move in the direction of the wide world -- the whole world -- of economics and its associated disciplines, and more particularly in the wide world outside of the United States. Here we have a beginning in our two foreign analysis divisions. The resources of the Economic Research Service are distributed in a ratio from something like 9, on the domestic side to 1 on the foreign side. Considering the things that are at stake for the United States on the foreign side, this is an imbalance in our

allocation of resources. We would hope to move a larger amount into the foreign side -- much larger -- because this is the part of the cold war that really counts.

As a final note, let me say that we are an affluent society here in the United States, but even an affluent society can't afford to do all of the things that it wants. I notice that the National Planning Association has set up a Center for Priority Analysis which is supposed to indicate which are the most important things to do in the United States. We, too, must direct our energies where they are needed most. We do need to orient much of our research toward the people who make decisions. We must be sure that we are working toward the solution of the big problems rather than the little ones. And in this very fast moving world that we have, we must be on the alert to identify the emerging problems, for, in a large sense, when a problem really hits us, we have failed in our research. We should be catching them when they are young problems.

As we look ahead during the next 3 days, let us keep these things in mind. Let us examine ourselves and the work that we do. Again, let me encourage you to speak your minds. I hope that you will ask any question that comes to your mind, and I do not restrict this just to the Economic Research Service. I am inviting Mr. McGregor and Mr. Trelogan, and all of our guests, to join in because I think this is the way we will make progress.

Now I've taken my time and I want to move on to Sherman Johnson. Sherman Johnson is one of our statesmen and scholars. I will say that we were delighted when Sherman accepted the job of Deputy Administrator for Foreign Economics. He has brought to that task the same imagination and the same vigor that he brought to the domestic side. I recall, Sherman, when you were Assistant Chief of the Bureau of Agricultural Economics that you did a wonderful job. Let me introduce Sherman Johnson.

~~X~~ AGRICULTURAL ECONOMICS RESEARCH -- PAST, PRESENT, AND FUTURE ~~X~~

Sherman E. Johnson, Deputy Administrator, Foreign Economics:

The 1961 appraisal of the Economic Research Service laid down two guidelines: (1) the research should be directed at significant problems, and (2) programs and activities should be efficiently conducted and managed. I want to talk about the first of these guidelines -- namely, problem-oriented research.

In emphasizing problem-oriented research, I do not belittle the importance of basic research, or the development of tools to do a better job in all our research endeavors. I recognize, however, that the greater part of our activities must necessarily be devoted to solutions of specific farm problems. Our budget each year is justified on realized and potential contributions to agriculture and the nation's welfare.

Some of you may feel that this means spending most of your time on applied research and that you will not have an opportunity to break new ground in agricultural economics. It may work out this way for some people, but much basic research and advancement of knowledge can flow from attempts to solve specific farm problems. In this connection it may be helpful to recall that the development of the field of economics is largely the result of struggles by succeeding generations of economists with the chief economic problems of the day. The classical theory as developed by Ricardo and Mill grew out of the food shortages that were encountered in Britain during the Napoleonic Wars. Keynes developed his "general theory" under the difficult conditions that prevailed in the depression of the 1930's. In our special field of economics, we find that most of the advances have been made by struggling with specific problems of agriculture. Suppose we briefly review some of the earlier developments.

It has been my privilege to know personally most of the pioneers in agricultural economics in the United States. Those in the forefront of the work in the early days were W. J. Spillman of the USDA, George F. Warren of Cornell University, H. C. Taylor and Benjamin Hibbard of Wisconsin, and Andrew Boss of Minnesota. I can best characterize these men by referring to the passage in the sixth chapter of Genesis, fourth verse, where we read that "there were giants in those days." These men were truly intellectual giants. One of them is still with us. Those of you who saw him in action at the 1961 International Conference of Agricultural Economists in Mexico know that the pioneer spirit was still strong at the age of 88.

These giants blazed a trail that successors could follow. Their hand tools would be considered crude by present standards. They cleared the path with axes and mattocks rather than with bulldozers.

But despite crude tools, they accomplished much. They were among the agricultural leaders of those days, not only in the special field of economics, but on all agricultural problems.

The 1920's was the growth decade in agricultural economics. Interest in economic problems developed as a result of the 1921 depression and its aftermath. The passage of the Purnell Act in 1925 provided research funds for establishment of many departments of agricultural economics in the land-grant colleges and for strengthening the work in the older departments.

Graduate training had been developed largely at Wisconsin and Cornell. But, in the 1920's a new giant appeared on the university scene in the person of John D. Black. He soon developed a reputation as a leader in the field, and students began flocking to the University of Minnesota.

Much of the research leadership in agricultural economics, however, was centered in the USDA. Federal research achieved new vitality, with the establishment of the Bureau of Agricultural Economics in 1922. As first chief of BAE, Taylor placed his former students from Wisconsin in key positions -- O. C. Stine, L. C. Gray, and M. L. Wilson. This group of research leaders, including H. R. Tolley who was originally employed by Spillman, soon gathered around them capable younger men, such as Mordecai Ezekiel, Jesse Tapp, Jack Hutson, F. F. Elliott, Louis Bean, and many others who helped to maintain research leadership in the 1920's.

There were problems in those days; and, fortunately, capable men to struggle with them. Let me quote from a magazine article published in the summer of 1924.

"Oh wretched abundance! Ruin and plenty are as twin specters stalking to and fro in the land. The Department of Agriculture causes expensive color posters to be displayed on the walls of the post offices, urging people to eat more meat. This is for the sake of the cattle raisers. There is propaganda in the same spirit for the sake of the grain growers. Bread is man's perfect food. Increase thereof thy morsel. We eat what we can. Yet of precious sustenance there is a surplus left. American agriculture is at the verge of economic despair. Over great fertile areas it is bankrupt. The Government is called upon to save it, either directly by grants of money from the United States Treasury, or indirectly by law, or both. It is believed to be unable to save itself. Also it is believed that unless it is saved the whole country will sink under the calamity of excessive abundance. Does it lie in riddle between God and man that you can have ruin and plenty at the same time?"

Does this quotation sound familiar even today? It was the opening passage in the first of a series of articles by Garet Garrett in the Saturday Evening Post entitled "That Pain in Our Northwest" (April 12, 1924).

At that time we had very little research on agricultural policy and little experience on which to base an attack. But we did have leaders who initiated research that led to a better understanding of farm problems and who also suggested ways of dealing with them.

Although the ideas involved in the McNary-Haugen Bill originated outside the agricultural economics fraternity, the concept was analyzed and sharpened by agricultural economists. H. C. Taylor was at least a silent partner in this endeavor. The domestic allotment plan was originally suggested by Spillman and later independently proposed by Beardsley Ruml. Charles Stewart of the University of Illinois was the chief proponent of the export debenture plan.

Another group of agricultural economists wrote learned articles in the 1920's to demonstrate that none of these proposals would work, but those who favored ameliorative action analyzed the possibilities of various proposals and became convinced of the desirability of new legislation on the farm problem. In his "Agricultural Reform in the United States," Black gave most attention to the domestic allotment plan, expanding on the original suggestions of Beardsley Ruml and Spillman.

As the 1929 depression deepened, especially in the wheat areas, M. L. Wilson became convinced that the domestic allotment proposal had the best prospect of success in view of the worldwide depression and virtual disappearance of the foreign market. Wilson and his associates worked out suggested applications of the plan to wheat. He was instrumental in selling the domestic allotment approach to farmers, members of the grain trade, insurance company representatives, the president of the U.S. Chamber of Commerce, members of Congress, and eventually to the Democratic candidate for President, Franklin D. Roosevelt.

The Agricultural Adjustment Act of 1933 was a compromise version of the domestic allotment plan. Its passage was a demonstration of the importance of leadership with definite plans for action. The three major farm organizations had tried to get together on a plan of farm relief, but their best efforts resulted in what was called the "three-headed monster" which was introduced in early 1933 in what was then known as the "lame duck" session of Congress. This bill provided for trying out the McNary-Haugen proposal advocated by the Farm Bureau. If this did not work, authorization was provided for the export debenture plan supported by the Grange, and even a cost of production plan, then supported by the Farmers Union. But Henry Wallace, M. L. Wilson, and their immediate associates had a specific plan which had originated in the economics fraternity. They worked

with farm organizations and other agricultural leaders to obtain passage by Congress of a compromise proposal that seemed to have the best possibility of providing relief under the world depression situation.

The passage of the Agricultural Adjustment Act ushered in the hurly-burly of the New Deal in agriculture. Some agricultural economists accepted it enthusiastically, some accepted it partially, some skeptically, and some not at all. I spent the year 1933-34 at the Brookings Institution, participating in their study of the Agricultural Adjustment Act. One day I tried my hand at classifying agricultural economists with respect to their attitudes toward New Deal agricultural legislation. With the thought that this classification may contribute to an understanding of present day schisms on agricultural policy, I present it here with a few editorial changes.

#### 1. The Economic Fundamentalists

They were the followers of Mill and Marshall and other classical and neo-classical economists. Basically, the fundamentalists believed that we lived in an economic world in which free competition prevailed, and that everything would be righted as market forces were given free play. They were badly shaken in this belief in 1932-33, but they quickly recovered when the economy showed signs of survival.

#### 2. The Neo-Fundamentalists

They believed essentially in the free play of market forces, but felt that some assistance to laissez faire was needed along several lines. For example, they favored some regulatory activities, improved credit systems such as provided in the legislation creating the Farm Credit Administration, also better tenure relations. But they looked askance at the Agricultural Adjustment Administration and they were horrified at the rural relief programs. The latter programs were regarded as using the taxpayers' money to help people who were too shiftless to help themselves.

#### 3. The Eclectics

This group realized that we had developed a mixed economy. They advocated putting the different sectors of our economy together in ways that would best serve private, group and public interests. They believed that ameliorative measures could be taken to promote prosperity in agriculture, and that farm people should have protection against hazards that are beyond their control as individuals.

#### 4. The Zealots

This group was hard to characterize because they differed in the causes which they were promoting. Some saw farm salvation only in agricultural adjustment activities, some in juggling the

price of gold, others in land-use adjustment, and still others in a farm resettlement program. They had one thing in common, however; each group was certain that their way was the only road to farm salvation. If you questioned the cure-all properties of their specific program, you were labeled not only as a conservative, but also as an obstructionist.

#### 5. The Faddists

These were the more extreme panacea-peddlers. Most of this group were outside the economics fraternity. Examples were the leaders of "farmers holiday movement," the "cost of production" advocates, and in later years, the proponents of the "7 to 1" theory.

#### 6. The Marxists

We had a few in the 1930's. Many of them were not recognized as such at that time -- their true colors came out somewhat later. The ones I ran into in those days seemed to have no specific program except to create confusion.

With the possible exception of the Faddists and the Marxists, all of these groups of economists were liberals by their own definition. The shades of liberalism, however, were like Joseph's coat -- of many colors. But if you knew the specific shade of liberalism of an economist, you could predict the conclusion he would reach on a question of agricultural policy. Why was this so? Because of his beliefs concerning the functioning of the economy. His valuations concerning the actions that should be taken in the interest of economic betterment stemmed from his conception of the economic world.

In 1933 at least, there was general agreement concerning economic illness, but there was sharp disagreement as to diagnosis and treatment. What about our present day disagreements? We still have them. Our natural science friends delight in pointing out differences in viewpoints among economists. Some of them say that economics is not a science because economists do not agree on solutions to economic problems. We, of course, reply that it is much more difficult to arrive at relationships that have predictive value in economics because we are dealing with continuously changing actions of people rather than with orderly natural processes. But the validity and predictive value of many economic relationships have been verified by research and they are now generally accepted by trained economists.

We have narrowed the gap of disagreement since the 1930's, but the question remains: How can research contribute to a greater area of consensus among economists? The answer seems to involve research on each of the following aspects of a farm problem:

1. Understanding the situation.
2. Ascertaining need for ameliorative action.
3. Agreement on target to be reached.
4. Research on alternative ways of reaching target.

Research to achieve a better understanding of the situation will contribute to greater agreement on the kind of economic world in which we are living. Much has been done to dispel the folklore that we are living in a freely competitive economy. Research in this field is largely the responsibility of the general economists. And many have been cultivating it with considerable success. Much more needs to be done, however, especially in bringing the results to the attention of the decision-makers and the general public.

Research concerning the role of agriculture in the economy is needed for better understanding of the agricultural situation. For example, the postwar research concerning agricultural-industrial relationships provides a sophisticated substitution for the "7 to 1" theory and the assertion that depressions are "farm led and farm fed." At the same time, the results emphasize the generative power of primary agricultural production in the total economy because of its impacts on factor suppliers and on distributors of agricultural products.

Sometimes the need for ameliorative action becomes obvious from an analysis of the existing situation. Frequently, however, it is necessary to analyze the consequences of continuing present programs or of abolishing them. For example, the Ellender report prepared in the USDA and similar studies by Iowa, Pennsylvania, and Cornell Universities have resulted in quite general acceptance of their conclusions that disastrous prices would prevail if all farm programs were abolished.

Although frequently controversy arises concerning specific short-term targets, there is even more disagreement on objectives of the longer-term rural welfare goals. Perhaps this explains why we have not concentrated research efforts on achievement of goals that involve the welfare of farm people in the national interest. For example, little research has been undertaken on educational and health facilities that would be necessary to give children in rural areas opportunities to develop their potentialities to the same extent as those in urban environments.

We have talked a good deal about equality of opportunity to earn income and living in agriculture comparable to returns for similar skill, effort, and managerial ability in other occupations. But we have not carefully analyzed the feasibility of achievement. We have not considered how many people are likely to be employed in agriculture under those conditions. We have also discussed the national

need for a prosperous as well as an efficient agriculture, but we have paid little attention to a desirable distribution of income among all farm people -- hired workers as well as farm operators.

If we could reach agreement on targets the research job of working out alternative ways of reaching the goals would be simplified. For example, owner operatorship of family farms has been the dominant structural organization of American agriculture. If owner operatorship of family farms is accepted as a target, research can be undertaken to develop alternative ways of achieving this goal. But should this structure of farming be accepted as a target without first analyzing some of its implications? What is the competitive position of family farms relative to other sizes of units in different farming areas? Perhaps large-scale units operated with hired labor do have competitive advantage, at least in some areas. The question then arises of how hired workers can achieve sufficient bargaining power to receive wages sufficient for acceptable levels of living. Perhaps a system can be evolved similar to that which has developed in Britain. Then, the question arises as to alternative actions that might be taken to bend the trends in desired directions.

Many other questions arise from analyses of the structure of agriculture. One of these is whether sustained prosperity is a realizable goal with farming organized in family units. Or, is a cycle of farm prosperity inevitably capitalized into higher real estate values which are converted into higher costs for the next generation of farmers? And, is such capitalization accompanied with investments in new technology which result in increased production and therefore lower prices of farm products? This sequence of events can be traced from the 1930's to the present time. Farmers were broke in 1933. Those who either managed financial survival or gained re-entry prospered in the war and rehabilitation years of the 1940's. But a large part of the higher income level was capitalized into higher land values for new purchasers, and much of the current income went into investment in new technology. The latter investments, of course, largely account for our vaunted efficiency, but they also resulted in increased production and lower prices. Hence the price-cost squeeze.

Can this cycle be broken? If so, how?

In this connection we might ask why with all of our increases in physical efficiency, it is necessary to make export payments in cash or kind to meet prevailing world prices for wheat and cotton. I am not raising the question of the need for controlling total output, but only the need for export payments on our commercial sales. Do some of our competitive difficulties arise from high capitalization of real estate, and a similar capitalization process in investments for adoption of new technology?

Data from the Cost and Returns series on wheat farms provide some indication of the effect of rising land values on "returns to operator and family labor." If land values had remained at 1937-41 levels on the Winter Wheat type of farms the average "return to operator and family labor" for the years 1957-61 could have been realized with an average price of wheat 44 cents a bushel below the prices prevailing in those years. On Spring Wheat-Small Grain farms the average 1957-61 "return to operator and family labor" could have been realized with an average price of wheat 40 cents lower than the prevailing prices.

One answer to the argument against a rapid rise in land values is that capitalization pervades our entire economy. We buy industrial stocks at prices based on capitalized earnings. A filling station in a good location with a large clientele is sold to a new owner at its capitalized earning power. But is the capitalization of land entirely comparable? What about the fact that one-third of the farm land purchases are made by nonfarmers? Perhaps even more important is the restricted opportunity for employment in many farming areas, which means that young people have to bid up the price of a piece of land as a means of earning a living.

I recognize that there are both gainers and losers involved in changes in real estate values, but we seem to need a thoroughgoing study of how the gains and losses are distributed. The study should also explore possible ways of channeling more of increases in income into higher levels of living for all farm people.

I have given most of my attention recently to foreign problems, especially in the less developed countries. We all talk about economic development, but we need to learn more about how it is generated. What is the role of agriculture in economic development? How can agriculture get underway rapidly enough to meet the greater demands for food and fiber -- demands resulting from both increases in population and higher employment in a growing economy? How can the vicious circle of ignorance, poverty, disease, and suspicion be broken? How much of our own experience is transferable to the less developed countries?

The questions I have posed are only illustrations of some of the problems ahead. There appear to be enough unsolved problems in agriculture to challenge our best efforts. Fortunately, the younger economists have better training and more powerful tools than were available in the 1920's and the 1930's. Some of the tools are so powerful that there may be a tendency at times to become "tool-happy." The need to remember that powerful tools require skillful operators. They need to be combined with brainpower to tackle effectively the tough agricultural problems of today and tomorrow.

Research is time-consuming, and unless we can visualize the need for research results that will become available in the future, actions may have to be taken without the guidance of research. This means that researchers have to prevision the future, to forecast the needs for answers to tomorrow's problems.

One way of keeping research abreast of changing times is through organized problem appraisal research that will provide better understanding of the continuously changing agricultural situation. Our statistical series and associated research are designed to do a part of this job. They involve measurement, evaluation, and appraisal of problems as well as a determination of how the problems have arisen. From such continuing problem appraisals, we are building a foundation of economic information that can be drawn upon for the emergency analyses that we frequently are called upon to make in the Government service.

More rigorous and imaginative economic research is involved in problem solving such as analyses of probable economic results from alternative lines of action. This is especially true if we are dealing with the broad problems of agricultural policy. Many of these problems are also controversial, which emphasizes the need for unassailable objectivity in analyzing the probable consequences of available alternatives. Fortunately, however, not all economic research problems are highly controversial. And usually controversies involve only the most exposed leadership. But all staff members need to be on guard to prevent needless criticism of research results.

I would like to emphasize that the research job is not done until it is brought to the attention of those who make the decisions. For the less controversial research results, it is largely a question of selecting ways of calling attention to the conclusions. Part of this is the responsibility of administrators. But, first, research results must be understood by administrators and then by the decision makers. The researcher, therefore, has the responsibility of presenting his results in understandable and readable form.

The Economic Research Service is a relatively new organization. We need to consider how best to make our maximum contribution to agriculture for the Nation's welfare. I feel certain that one of the requisites is a sense of mission, or concern, that inspires each one of us to make his best contribution. One of the differences between private and public employment is the greater opportunity which we have for service to society.

Despite prevalent notions to the contrary, Government service is competitive. And competition becomes keener with each step up the ladder. Motivation, training, and native ability are all necessary for success. I have seen many persons set their own

ceiling on advancement, either because they lacked motivation for greater effort, or because they were unwilling to undergo the necessary training.

I am intrigued by the stamp of personality that one senses in different agencies of the Department of Agriculture. In the Forest Service, for example, the imprint of Gifford Pinchot is plainly evident in the third generation of foresters. Hugh Bennett has gone to his reward, but the Soil Conservation Service still reflects his evangelistic zeal concerning the importance of conserving the soil. Taylor succeeded in providing objective research and statistics that soon gained the respect of Department agencies, members of Congress, and eventually the general public. As a result, the BAE developed a worldwide reputation for competence. Departments and Ministries of Agriculture in foreign countries tried to build their economic and statistical agencies according to the BAE pattern.

It is now up to us to equal, and even to excel, the worldwide reputation of BAE. That is the challenge. It will require the best efforts of all ERS personnel. Good leadership is essential, but an agency's reputation is built by demonstrated ability on the part of all staff members, and by teamwork and high morale in performance of responsibilities.

~~X AN OUTSIDE VIEW OF ERS X~~Koffsky:

Last year when the ERS was newly organized we asked Professor Bob Clodius to come in from the University of Wisconsin to head up a committee to look at the research program of the ERS. Since that time our next speaker, Bob Clodius, has been made Vice President of the University of Wisconsin and has been appointed as one of the members of the USDA Committee on Agricultural Science. This committee is made up of 15 outstanding people, 10 of whom are physical scientists and 5 of whom are social scientists. They are to take a long look at the research program of the Department. Go ahead, Bob.

Robert L. Clodius, University of Wisconsin:

My associates on this committee were Fred Waugh, Charlie Kiefer, and Bennett White. The four of us spent two hard-working weeks in July last year looking at ERS. It is largely on the basis of this review that I base my comments.

Suppose you had the kind of assignment I had -- to come in from the field, even as many of you came in from the field, or to come in as a man from Mars as Charlie Kiefer likes to say, and take a look at ERS. How would you frame your review, what points of reference would you use? We asked ourselves two questions. What is the setting in which agriculture will operate during the next decade? What criteria should be used in evaluating the research of the Economic Research Service?

We answered the first question by saying that the dominant economic feature of the national economy and the major policy issue in the next decade is going to be economic growth. It will dominate the ideas of economists and policy makers in the country. We also recognized that we know precious little about economic growth and the process of economic growth and agriculture's role in economic growth. Certain dominant features stand out. One, that agriculture becomes a smaller contributor to gross national product. Another is that population in agriculture declines. Still another is that the service industries grow relative to the other industries. Finally, growth causes problems of agricultural adjustment and problems of equity. This is the seamy side of progress. Thus, growth and adjustment to growth can be a unifying theme in trying to appraise the ongoing activities of ERS.

As we came up to each Division and each project within each section of ERS, we tried to ask ourselves the question, how does this fit into a framework or consideration of growth? What is the relation of this research to the problems of growth and adjustments to growth?

Then we addressed ourselves to the question of what criteria to use, and we set up two for considering the operations and activities of ERS.

The first criterion was that the programs and activities must be vital. Vital, taken from the Latin word meaning life! There must be life in the programs and activities of ERS! They must be directed toward significant and important issues and problems. And, of course, the central issue and problem that we posed here was economic growth. We thought this probably was the most vital problem not only in the United States but also in the world today. Further, we said that vitality meant that the programs and activities must be sensitive to problems and they must be responsive to new areas and to new problems of present or future significance. In other words, we wanted an ongoing program in ERS that would be a live one that had sensitive antennas out around -- not just for present problems but also trying to anticipate new problems before they arose so that research would be available when someone wanted it for a problem.

The second criterion we set up in addition to the vitality criterion was that the programs and activities must be efficiently conducted and managed. Efficiency is an obvious criterion to an economist. It means such things as the minimization of duplication and overlapping. Then in fine economic tradition we wanted to maximize coordination among and across disciplines, among and across agencies inside Government and also outside the Government, maximize coordination among and across divisions, branches, sections, and between Washington and the field, and the like. In other words, we wanted a management of the economic research that would be efficient. This is a nice model, I think, so let's try it on for size, and see how it works as we take a look at ERS.

What was ERS? What did it look like a year ago as we tried to use these criteria and this model approach? Well, it was a series of shocks. This is my personal evaluation of it; the others can speak for themselves. To look at ERS in this framework was a kind of traumatic experience -- one shock after another. What were these shocks?

One of the first things was the realization that ERS is not the only outfit that is doing research in the U.S. Department of Agriculture. Now maybe I am just expressing here that I'm sort of an ag-econocentric person and I thought that the U.S. Department of Agriculture was all economic research. But it was a shock to me to discover the size and scope of natural science research in the Department of Agriculture and that of all of the 25 units into which the research in agriculture might be broken down, there are only 4 of them that are concerned with economic research.

The second shock came upon my discovery of the size of ASCS. It is the giant in the Department of Agriculture. Really if you are talking about research as a whole, and here I am including all physical and natural science research along with the social science research -- research is just a peanut operation compared with the magnitude of the other activities in the USDA. To continue this analogy -- if research is just peanuts in the USDA, social science research is just a mustardseed. When you begin to take this mustardseed up and look at it a little bit, you find that it is organized into the five divisions of ERS.

We broke the activities of the mustardseed down into three parts. One of these we called ongoing data-gathering and analysis and reporting -- a large field of data work. A second field of activity was that of servicing requests of all kinds. We heard story after story from the people in the divisions of the magnitude of these service requests. We finally found an activity that was research. Actually these divisions do carry on some research. It's a great shock to discover the amount of resources that go into the data field. And Division Director after Division Director and Branch Chief after Branch Chief and Section Head after Section Head told us of the amount of time and resources that went into the data field. The question comes up, is this amount of data gathering and reporting tolerable in a research service? And the next question logically comes up, should some of these service activities be transferred out of the research service and into the Statistical Reporting Service? If SRS is to be concerned with data and its reporting as the source of raw materials for economic research, then you might ask a third question, where is the Statistical Reporting Service? After this comment I expect that Harry Trelogan is going to come up and beat me over the head and that will be the answer as to where it is. At about 11:30, Harry, we'll give you an opportunity for equal time.

The other activity that we found that seemed to be sort of dominant in the use of the time of ERS personnel was the servicing of requests. These requests cover a wide gamut and include the highschool youngster who writes a letter and says, in effect, I am writing a theme for my teacher on agricultural policy and will you please send me all your materials. You know, something nice and neat and well thought out and tied down specifically, and so on. Well, what is the role of the servicing of requests in the Economic Research Service?

We might ask the question here, where is the Agriculture Departmental Information Service? Is this an agency that ought to be making available to the public the results of research? Should the servicing of all requests come to them as a matter of something that has already been produced and is available for public consumption? Or we might ask the question, what about the activities of the

Management Operations Staff? Where's Charlie Kiefer? Maybe here is the place where there should be some coordination of the servicing of requests. You see this isn't very refined yet. We didn't go deeply enough into this whole area of the servicing of requests. I have a strong feeling that research must be protected. Not that you people aren't able to protect yourselves, but there needs to be some kind of buffer between the research worker and all of the immediacies and urgencies of the real world. Our committee recognized that servicing of requests goes on, that there is much of it that is important, that certainly it ought to be called to the attention of the appropriate officials and that it ought to somehow or other be recognized that if you are spending one-third of your time servicing requests, then you shouldn't be held accountable for 100 percent production on research. If you take the one-third spent on servicing requests and add on another 20 percent for data gathering and reporting, then, again, you shouldn't be held responsible for 100 percent production on the analysis of economic problems.

Somewhere I feel in this whole business of servicing requests there has to be someone who can say no. Ultimately the heat of saying no is going to be borne in the Administrator's Office. Does this mean then that there should be some centralization of these requests? Should they be funneled in through one place and then passed out around? Or is there some responsibility here for the individual investigator to make a determination...when a request comes in he may say, "Look I have my shop set up on a very important problem and we just can't take time out to service this request right now," so the answer ought to be "no." Well, you see there are some uncertainties here that come up in a review of this kind and I don't know what the answer is. I think that as ERS moves ahead that there should be some attention given to a critical review of the activities of servicing requests.

The final shock came in the area of efficiency in research and research management. We might discuss it in terms of the word "fragmentation" and what fragmentation has meant in terms of conducting research efficiently. ERS is made up of fragments called sections, branches, and divisions, and the professionals in these different fragments unconsciously begin to take on an identity with the particular area in which they work, so that a person begins to think of himself not as an economist in the generic term but rather he tends to think of himself as a marketing economist or a farm economist or something else. This departmentalization in thinking begins to break down the work of our field into segments or into fragments.

Take another example, the study of social behavior of men. Instead of considering ourselves social scientists, as I think we really should, we identify ourselves as agricultural economists or rural sociologists or agricultural historians or rural demographers

and so on. Again, this is a fragmentation of the field which is the study of the social behavior of man. The world is fragmented into nations and the United States is fragmented into States. A geographical orientation in ERS begins to give economic significance to historical compromises or to historical actions. And of course you can raise the question, are our economic problems coincidental with accidents of history or with historical compromise? And the answer is, certainly not. Using a geographical orientation begins to give economic significance to something that really has no economic significance. Food and fiber can be fragmented into commodities and products. Such an orientation as commodities and products superimposed on a geographical grid creates almost unlimited bits and pieces for researching in ERS. You can almost project it ad infinitum. This fragmentation leads to a number of dangers and a number of problems, many of which we found in ERS in our review.

One real danger in fragmentation is that the bits and pieces may not add up to anything truly significant. This is the problem of aggregation and we haven't solved it on a theoretical level yet, and most certainly not on an administrative level.

Another danger of fragmentation is that the contribution of one discipline may not be made available to another discipline. This is the problem of the sociologist and economist each working in his own field, thinking only in terms of his field and his own discipline, and not recognizing the interdisciplinary nature of problems.

A third danger is that inefficiencies may develop within and between agencies doing research on the same or similar problem. This, for example, could be illustrated outside ERS in the field of human nutrition. Nutrition research is going on in the U.S. Department of Agriculture; and in Health, Education and Welfare. Another example is rural area development. Everyone wants to get into the act. In the area of foreign development you find AID in the act and Agriculture getting into the act.

Finally, these fragmentations invoke all of the problems of equity or, to use an old term, parity. Each discipline begins to feel that it ought to have its fair share of support. Each division begins to feel that it ought to have its fair share of support. Each branch, each commodity, each state, wants its fair share of support in research.

Another problem that concerned us has to do with the optimum proportions between the Washington staff and the field staff. This is something that all of you are interested in. As a first approximation, I think you might say that there shouldn't be any field staff. They all ought to be in Washington. This is a point of view that conceives of the Washington staff as a sort of task force analogous

to a naval task force. The naval task force isn't going to do much if it is scattered out all over the ocean. On the other hand, if a task force is pulled together, you begin to get a critical mass of people which can be turned to one task and another and bring some power to bear on the job.

Of course there are many qualifications to this. There are certain kinds of problems which in their very nature have a geographical orientation. Someone is needed in that geographical location to bring in the data and to carry out the research. But I think there are certain things you can say about Washington-field relations. One is this -- if a field staff is to be used merely as a device for proliferation on a geographical basis, it is probably a questionable idea. If a field staff exists merely to represent a group who will follow instructions or orders from the head office, if you exist out in the field only to be told what to do, only on instruction from the head office, it might be tolerated. But this does not represent to me the best use of professional talent. On the other hand, if you have a field staff as a kind of intelligence group, where creative ideas that are discovered in the field might be fed back into the home office, where projects or ideas about projects might be initiated that have not yet come to the attention of the people in Washington, and if the people in the field have some freedom and some initiative to be creative and to develop some of these areas they discover to be important in their areas, then I think the existence of a field staff has some real merit. On this basis, it should be pushed as far as the merit will allow it to go.

Another activity that loomed important as we made our review had to do with land and water research. We discovered it in the Farm Economics Division, but it was quite obvious to those of us who listened to the reports of all the Branch Chiefs that this somehow or other was a different kind of animal in terms of the problems to which it addressed itself, in terms of the concepts that it used, in terms of the institutions with which it was concerned, than the research of all of the other research divisions. This gave us some concern. Now, of course, the land and water research has a strong institutional element in its research, and some wags have doubted that it belongs to economic research at all. But we passed over that problem. We agreed that it is economic research, and we just "passed the ball" to the Administrator to let him decide where it ought to be placed.

We came to conclusions that certain areas needed increased attention because of the significance that they have for the vital problems of growth and adjustment in the coming years. They included the following:

Supply of farm products -- this is an ancient and honorable area in economics and we are not going to be able to get away from it.

Demand for farm products -- again an ancient and honorable area.

Long-term projections -- again an area that has had a long history in economic research in USDA but one that needs continued support.

Bargaining power of farmers -- here is the old issue of equity that raises its head in relation to one of the aspects of economic growth. This is the seamy side of progress as it shows up in agriculture.

The relation between agricultural and general economic policy -- agriculture has had a habit of going its own way and we know little of the interactions between agriculture and nonagriculture.

The economics of development -- of course it's important in a decade where economic growth is receiving so much attention and it's obvious.

World trade -- again, the nature of the world in the next decade is one in which increased emphasis must be placed in this area.

And, finally, something that we called alternative methods of implementing research results. This is gobbledegook that means program analysis. We thought this was an area in which increased research attention must be given in the next decade.

We recommended that study groups of from five to seven persons be selected to initiate study in some of these most significant areas. To pursue some of our other observations about the efficiency with which research is being conducted, we said these persons should be selected across divisional lines when the interest is so indicated. Each study group should be under the guidance of one person and he should report to the Administrator or his designated representative from time to time. We would expect that the activities of a single study group would terminate in 6 months or no longer than a year. So here we made some recommendations to try to avoid some of the other dangers that I spoke of under the subject of fragmentation.

I thought you might be interested in some of the observations that we made with respect to each of the five divisions. To take my colleagues off the hook I will accept complete responsibility for these observations. They were made a year ago and maybe they were more valid a year ago. This is the sort of image that the divisions communicated to me. I'll start with the foreign divisions first, Development and Trade and Regional Analysis. A year ago these two divisions could be characterized by "delightful confusion." Regional Analysis Division had been slugged by a project on the world food budget. It was groggy and reeling from this blow and had been turned inside out and upside down. All of its resources had been

devoted to servicing this request from the Secretary of Agriculture. Furthermore, their data gathering and reporting involved them in a very complex and difficult problem. We raised considerable questions about the data problem and the amount of resources they were devoting to it. Development and Trade Analysis Division, a year ago, was largely a phantom division. It had a director but it was not much deeper than that in terms of professional staff and its understanding of the problems. Now, after having talked to both division directors the other day in connection with another committee assignment, I come away with the feeling that these two divisions are really shaping up very well. Maybe these review committees should get off their backs and let them work out their problems. But, again, I think there will be continuing problems of coordinating the activities of these two divisions as they develop.

Now we come to Farm Economics and Marketing Economics. Both of these divisions are so big that lumping them together doesn't make much difference so I'll lump them together. They are very large divisions. They were competent. This was the impression one carried away -- that these people knew what they were doing in their specific projects. You also got the feeling that they were rather conservative divisions -- that they had been around a long time, they had had considerable support over the years for their work and they were moving ahead at a measured and steady rate. Also these divisions had something that I associate with large metropolitan areas -- they had a considerable amount of rural, instead of urban, sprawl associated with them. Some of you represent the rural sprawl that we found there. These divisions are very heavy on the service side and very heavy on the data side. I also got the impression that they had not yet learned how to work well with one another. Of course this might be expected from a year ago. They had been taken out of their respective AMS and ARS and been given a kind of shotgun marriage. They had not yet developed the ways and the means of coming together on research on problems that obviously involved an interdivisional relationship. Proliferation and fragmentation both seemed to be adjectives that were characteristic of the work of these two divisions. This is a problem for them, because of their very size, because they are so big. You have all these people and so they will naturally be working on different things.

Then we come to Economic and Statistical Analysis. This "ball of wax" is a very difficult one to pick up, because it is a kind of residual claimant on everything that can't be fitted anywhere else within economic research. They include such diverse activities as sociology, history, econometrics. This is a difficult group of areas to weld together into an effective division. About the only conclusion I came up with here was that there are going to be some problems of seeing that the work of this division

is coordinated within the division as well as coordinated across divisions. Many different kinds of professionals are involved. They do have talents that can contribute to other divisions and the working relationships are rather critical.

I want now to turn to my current committee assignment. This is the Committee on Agricultural Science. It is made up of both natural scientists and social scientists. The social scientists on the committee are Ray Bressler from California, Maurice Kelso from Arizona, Ed Bishop from North Carolina, M. E. John who is the sociologist from Pennsylvania State, and myself. This committee was set up on the recommendation of a panel of the President's Science Advisory Committee.

It has two concerns. One is a rather immediate concern which has to do with the budget proposals for the fiscal year 1963-64. Before October this year we are supposed to come in with some recommendations to the Secretary of Agriculture about the budget for the research activities of the Department of Agriculture. Also we are supposed to make recommendations on the 5-year projected program of research for food and agriculture in the Department of Agriculture and the 10-year program of the Forest Service.

Specifically, we are trying to consider certain questions. The first question, what is the optimum allocation among areas of agricultural research? How much should go for entomological research, how much should go for forest research, how much should go for social science research, and the like. This is an economic problem of trying to allocate scarce resources to maximize utility.

Another problem is this: What is the optimum allocation between the two organizations of research commonly called in-house research and its opposite number, extramural research. This is a problem solving the research that goes on within the establishment and the research that is farmed out in some way.

Thirdly, what is the optimum proportioning between the professional staff and other research resources which are organized around the professional staff? Do you have enough -- does each individual researcher in ERS -- have enough in the way of secretaries, space, supplies, calculators and so on, built around him so that he is the most efficient professional worker? Is it a matter of adding more professional workers or is it a matter of supporting each professional worker much more adequately than he is today?

Fourth question, what can be done in the way of salary and other inducements to insure a supply of qualified agricultural scientists? This is one, I am sure, that is going to occupy the activities and deliberations of the committee to a very great extent. I might put myself on record here as supporting the President's pay reform bill.

A fifth question, is a system of grants necessary or desirable, or are there other fiscal devices that are needed for supporting agricultural research? At the present time, for example, agricultural research is supported by the ongoing activities of the Economic Research Service. Also, agricultural economics research is supported through the Cooperative Experiment Station Service and the Agricultural Experiment Stations. Also research is supported through the device of contracts and that of Memoranda of Agreement between the Government and the State Agricultural Experiment Stations. On top of this do we need a system of grants as used by NIH, NSF, NASA, and so on? To what extent, in this kind of competitive world for the research dollar in which we are living, does USDA need to adopt the competitive devices of its rivals? We might apply the theory of oligopoly as an aid and see what we come up with.

Let me close by giving you another outsider's view of the U.S. Department of Agriculture and its economic research. Among my graduate students is a Frenchman, and a very sophisticated Frenchman at that. He is studying the effects of the Common Market on French agriculture. Of course he has a very serious problem of finding the right data. He has been writing to France, and to FAO, trying to get data and certain other information without too much success. I suggested that he might come to the Department of Agriculture to snoop around and see what he might be able to find. He did so and when he came back he was fairly glowing. He was cordially received in every office in which he ventured. He had been able to find all of the data he wanted. He had a very wonderful experience. And so I asked him, "Well, Bernard, what's your opinion of the economic research in the U.S. Department of Agriculture?" And he said, "Why, Mr. Clodius, they have everything there -- c'est magnifique." So, as they say on the floor of the Senate, "I would like to associate myself with the remarks of my French colleague -- 'c'est magnifique'!"

Koffsky:

As you see, we didn't really invite Bob Clodius here to come and say nice things about us. Bob, I must say it wasn't the way you said it but what you said that troubles us.

Now I'd like to take 10 minutes and entertain questions.

Finner asked that Clodius give some amplification of his use of the term "conservative" in connection with the attitude of the Farm Economics and Marketing Economics Divisions.

Clodius replied that he used the term conservative in a sense that he felt there was perhaps some resistance to change. Programs of each of these divisions have been established for a long time

and are ongoing programs. Division people commented that they had spent a lot of time thinking about the programs and their directions and it was in this sense that he was using the term conservative. For instance, he raised the question with the Farm Economics people as to whether they shouldn't be working more closely with the Marketing Economics people in looking at the relationship between agricultural supplies and the structure of markets. Farm Economics replied, yes, that would be a good thing. Another area is the vertical integration research conducted in the Pioneering Research Group of Farm Economics. Shouldn't there be similar research efforts on this problem in the Marketing Economics Division and the two work together? Again the Farm Economics people agreed it was a good question. Another area of joint interest is in inter-regional competition where each has something to contribute and to be concerned about. The very size of these two divisions probably introduces a certain quality of conservatism in their approach.

WHAT SRS CAN DO FOR ERS

Koffsky:

Now I introduce to you Harry Trelogan, Administrator of the Statistical Reporting Service, who was Assistant Administrator for Marketing Research of the Agricultural Marketing Service. That's where most of us became acquainted with him. Harry has moved into the Statistical Reporting Service, where there are perhaps the greatest challenges existing for any of our profession. He is going to talk to us on what SRS can do for ERS.

Harry C. Trelogan, Administrator, SRS:

Can you imagine an economist working without numbers? Especially an economic analyst coping with agricultural problems in the United States? The very least SRS can do is furnish numbers to keep ERS staff members from being likened to one-arm paper hangers or tight-rope walkers with St. Vitus's dance.

Recently one of our foreign emissaries mentioned to me the lost feeling that enveloped him on assignments abroad when he was unable to find statistics on the agriculture of the countries to which he had been assigned. Heretofore he had taken for granted many of these statistics that were available to him here. In this respect he was very much like many farmers, businessmen, bankers, and editorial writers. He, and possibly you, have regarded basic agricultural statistics as a free good.

A reason for this tacit assumption is the fact that provision for the acquisition of such data is not made within your own budgets. You have become accustomed to getting the benefits of many data that you have had little or no part in generating or paying for. This has certain obvious advantages, but also some limitations that present mutual problems appropriate for discussion in a session such as this. Perhaps the best means for approaching these problems is to project a concept of our respective roles, and to acquaint you with the SRS programs, plans and ambitions.

Together we have a responsibility for presenting an economic profile of American agriculture. The outline must be developed in sufficient detail to contribute significantly to efficient operations of current business within this complex and essential sector of our society. Our data and analyses must be of sufficient depth to permit diagnosis of the ills of the agricultural economy and provide a basis for developing corrective measures. We should supply sufficient background information to provide a basis for projections and forecasts, and also help interpret trends and developments to enable legislative and administrative officials to exercise intelligent judgments on relevant policies and programs.

The close affinity of SRS and ERS in the USDA organization evidences recognition of the interdependence of our work. In fact, it is so close and the historical associations of our functions have been so persistent that we encounter difficulty at times explaining the delineation. There is nevertheless solid ground for distinguishing between the data-gathering function and the economic analytical function. The job of collecting, handling, and summarizing statistics involves a distinctly different set of aptitudes, procedures, and methods than that of analyzing and interpreting the data. This is particularly true when the data are intended to serve several uses of which economic analysis must be regarded as only one, and not necessarily the primary one. From the standpoint of getting support for agricultural data collection, farm and business interests rate far above research economists. In some measure this reflects relative values of usefulness.

Actually, economists generally get the bulk of their data as byproducts from other activities. Even the census of population in the U.S. must be regarded as an accidental heritage from a political apportionment system uniquely introduced in our Government.

Multipurpose data are seldom completely satisfactory for any one of the uses. In many respects SRS is continually trying to reconcile differing views of diverse users. I say reconcile because we have little hope of responding to all desires simultaneously. Among the dissenters to whom we have to listen, ERS ranks high because of their proximity and their rather specialized needs. Nevertheless, we give your outfit more personalized and tailor-made service in the way of unpublished data and special surveys than any other clientele. One service we can provide ERS is to listen patiently; and to supplement the bedside manner by endeavoring to anticipate your needs with the view to accommodating them more adequately as we move forward.

#### Improvement in Coverage

Definitely germane to this point is the SRS objective of improving the coverage, accuracy, and timeliness of its crop and livestock estimates. Over the years greater stress has been placed on broader coverage to extend the forecasts and estimates to more commodities and areas or States as they become commercially important. With greater specialization in farming and new technological developments throughout agribusiness this drive is better described as supplying greater detail by breaking estimates down into smaller classifications to meet specific needs. Cattle estimates, for example, have progressed from annual inventories to breakdowns by beef and dairy, to cattle-on-feed by weight groups, time on feed, and locations; and for some States -- first annually, then quarterly, and now in three States monthly. The degree to which this fragmentation of data for regular reporting has progressed in all commodity groups is difficult to realize.

For crops, the cycle of estimates begins each year with intentions to plant, followed by crop acreages and yield forecasts during the growing season, and ends with harvested acres, production and final utilization of the crop. A wide range of other estimates is made throughout the year including livestock inventories, animals on feed, output of livestock products, stocks on hand, prices paid and received by farmers, farm labor and dairy statistics. These estimates are released through the medium of about 700 reports per year of which about 335 are issued by the Crop Reporting Board from Washington. Of these reports, 34 include highly speculative information and are released from the Board's lock-up as prescribed by law.

The basic information for these reports is, for the most part, collected, tabulated, and analyzed in 43 State statistical offices covering all 50 States. These offices are responsible for collecting information within States through regular mail surveys, by phone, and by personal visits. Individual State estimates are prepared from these data and submitted to the Crop Reporting Board for final review.

Mail surveys as well as enumerative surveys and objective yield measurements are conducted on a rigid time schedule. In general the data must be collected, summarized and estimates prepared by the field offices for the Crop Reporting Board's review and issuance within a period of 10 days to 2 weeks.

Most data for crop and livestock reports are collected by means of questionnaires mailed to crop reporters and other lists of agriculturists. The great reliance upon mail surveys is attributable to the relatively low costs of collection, and small staff requirements to implement the simple methodology developed to convert the voluntary reports into estimates and forecasts.

Questionnaires are mailed to lists of crop reporters reporting for their farms and special lists of merchants or handlers reporting other data at specified times during the season, at monthly, quarterly or longer intervals, depending upon the frequency of the report to be issued. The information asked for is reported in terms of acres planted or harvested, numbers of livestock, prices paid and received, expected production, yield or crop condition. Except for condition, these data are interpreted as relative to comparable figures from the previous year to obtain estimates of per farm changes, or ratios to land in farms, to get estimates of per acre change, or both. Persistent bias is removed by charting. Allowances are made for changes in farm numbers or land in farms. The last available census of agriculture provides the primary base for projecting estimates forward. Check data obtained at the end of the season are used to true-up the annual estimates. When the quinquennial census of agriculture is made available, these estimates are again

reviewed and revised if necessary for the five-year period since the last census so as to conform generally with the level of the new census. These represent steps taken to reduce the effect of selectivity inherent in the mail questionnaire method, a sacrifice required to gain the advantage of low cost.

Condition reports and expected production per acre are converted into forecasts of yield monthly during the growing season. These, too, represent inexpensive but imprecise methods which require supplementation to improve their dependability.

#### Accuracy

At this juncture greatest emphasis among SRS objectives is being given to improvements in accuracy. Our ultimate aim is to develop the estimates from probability samples and objective measurements that assure a higher degree of dependability of estimates and forecasts. This in itself would be a boon to ERS analysts. But we hope to go further, primarily for the benefit of the econometrician, by giving standard errors along with the estimates. One can hardly overstate the magnitude of this task. Let me briefly indicate how we are going about the job.

You will recall that heretofore we have been almost completely dependent upon mail questionnaires completed by voluntary reporters for current data. Reliance was placed on relatively large numbers of reports; and upon the know-how of experienced statisticians to correct for reporting biases, sample distortions and other adjustments. Subsequently, marketings and use data were obtained to confirm or amend before final estimates were issued. Many of the major benchmarks were derived from the quinquennial agricultural censuses. On the average, these check data became available several years after the current estimate. In view of the dynamic nature of farming in recent decades the benchmarks were obsolete before they became available. The risk of substantial error was ever present and on several occasions became painfully evident.

Our purpose now is to obtain benchmark data each year on a sampling basis as a foundation for the superstructure of current estimates derived from voluntary reporters. Two enumerative surveys are visualized each year: one in the spring to give dependable bases for data on number of farms, land in farms, acreage planted or to be planted, and livestock numbers; and one in the fall to check the extent to which the plans for production are actually carried out and to reassess the livestock inventory. In the interim months between the two enumerative surveys, objective yield surveys on important crops based on field counts and measurements are introduced to undergird the condition and probable yield data from mail questionnaires to arrive at yield forecasts during the season.

At the time of the spring enumerative survey (which is centered on June 1), all plantings have not been completed so that the June 1 acreage estimates contain intentions to plant which may or may not materialize. Abandonments, compliance reductions, and disaster losses along with changes in intentions occur during the growing season. Supplementary surveys measure the changes in acreage. With objective yield surveys, plots in which the observations are taken are located in a sample of fields from the spring survey, so the farmers are interviewed at the time the fields are revisited to obtain estimates of acreage changes. For crops that are estimated by mail surveys, questionnaires may contain acreage questions along with crop condition and expected production.

The fall survey, centered on December 1, is the last measurement of realized productions, and completes the cycle for the season. It is taken from about one-sixth of the farms included in the spring survey.

As soon as the enumerative survey program becomes operative we hope to develop probability sampling methods to the mail questionnaire approach. The fusing of these two methods gives the best promise of acceptable precision at reasonable cost. Beyond this the program offers other opportunity for further service to ERS.

#### Timeliness

Attainment of the accuracy objectives would be inconceivable without access to large-scale electronic data processing equipment to handle the computations. The current reports are issued on rigid time schedules with only about 10 days to two weeks intervening between the submission of individual questionnaires from farmers in all States and the issuance of national estimates from the Crop Reporting Board in Washington. We hope to maintain and possibly improve the timeliness of these reports through the use of ADP.

The peak loads imposed by the tight time schedules dictate the use of large-scale equipment. To use such equipment continuously and efficiently it is necessary to share its use with other agencies. This enables SRS to offer ERS another type of service, namely, data handling and processing. SRS is also endeavoring to provide associated professional services such as statistical consultation, systems analysis, and programming, as well as the use of a substantial amount of peripheral equipment including a recently acquired data plotter. Together we will be able to provide a wide range of statistical competence that will facilitate economic analysis immeasurably.

One phase of our survey activity, which is distinct from the crop and livestock and estimating program, is specifically designed to be conducted in close association with ERS domestic and foreign

research. This is the opinion and attitude market survey activity conducted by the Special Surveys Branch. Success in this endeavor depends upon effective communications between our respective staffs throughout the stages of project development; i.e., conception, planning, conduct, and reporting.

This, of course, applies to specific studies (conceptualized or) initiated in the Special Surveys Branch. Of equal importance is research which can be developed through an information flow from ERS to SRS which will keep this Branch informed of your evaluation of emerging marketing problems, in general, or for specific commodities, as they become apparent to you as analysts. This will permit the group to complement your research in a thoughtful and integrated manner.

This is a problem that is not, as yet, satisfactorily resolved and SRS is anxious to participate in a closer working relationship that will be mutually beneficial in the performance of this area of research.

#### Sources of Data

Thus far my discussion has been intended to stress the quantity and quality of data supplied by SRS but we are fully aware that SRS is not the only source. We clearly recognize that much of the time and resources of ERS are devoted to acquisition of data. Nevertheless, the plain truth is that the great bulk of data handled, processed and analyzed by ERS is derived from secondary sources. Fountainheads of such data are the Census Bureau, Bureau of Labor Statistics, and SRS. While the supplementary data usually acquired on project by project surveys impress the collector with their importance, they still must be regarded as most useful when added to a large, reliable base available from other sources.

One of the incidental pitfalls of conducting surveys as an integral part of economic research projects is the temptation for the researcher to become so engrossed in the data collection as to give inadequate time and attention to the analysis. I hope I have been able to convince you that data collection is sufficiently intricate that full use should be made of the facilities and staff engaged primarily to provide this service and that it behooves the economic analysts to conserve their own time and improve the quality of their own work by devoting their major efforts as economists to the analytical aspects of their work.

In a reciprocal way the SRS will confine its activities to data collection and reporting. Such an arrangement will contribute greatly to the clearing up of confusion with regard to the respective roles of our agencies.

In view of these relationships it will be to the distinct advantage of ERS to recognize and support the work of the major data collection agencies. This pertains to the quinquennial census as well as to crop and livestock estimates and market surveys. Each of these provide data that cannot be adequately supplied by other agencies. For example, the census is essential to supply county and local data and numerous types of economic data required by the economic analyst. Once crop and livestock estimates has its enumerative survey machinery in operation, it will be able to provide more current economic data but the services will have to be compensated by the recipient agencies, and in no sense can this opportunity be regarded as an alternate source for the great bulk of data provided by the Census.

In a similar way, the enumerative survey and objective yield approaches to data collection cannot possibly be regarded as a replacement for mail questionnaires. In the future we will probably have to elicit voluntary reports from a higher proportion of the remaining farms. We hope to meet this challenge and be in position to supply ERS with lots of reliable numbers.

## XREDIRECTION OF ECONOMIC RESEARCH X

Frederick V. Waugh, Economic and Statistical Analysis Division, Chairman

Waugh:

Bob Clodius told us this morning that we need to keep our economic research VITAL. The process of life is the process of continuous change. Our economic institutions and our economic problems are always changing. If our research program is to be vital it, too, must be changed frequently to meet the needs of the time.

This afternoon we will discuss three things that may help us redirect our research to keep it abreast of current and emerging problems.

First, Earl Houseman and Burt French are going to tell us about automatic data processing.

We will then consider two innovations which were instituted about a year ago by Administrator Koffsky. The first of these innovations is several study groups set up to consider research on some of the emerging economic problems that cut across Divisional lines.

The other innovation is that of coordinating committees. Three committees in ERS were set up to coordinate research in rural development, economic projections, and in foreign economic development.

Our first speaker is Earl Houseman, Director of the Standards and Research Division of SRS.

### Use of ADP in Economic Research

Earl E. Houseman, Standards and Research Division, SRS:

I would like to review our ADP situation in view of the fact that Agricultural Economics, i.e., ERS and SRS, expects to replace its IBM 650 with a large-scale computer. Secondly, I would like to say a few words about the use of an electronic computer for processing survey data.

The Data Processing Branch has had 4 years of experience with the operation of a 650. Use of the 650 grew from about .8 of one shift at the time of installation in May 1958, to  $2\frac{1}{2}$  shifts by

January 1961, which is close to a practical maximum, and since then the amount of data processing work being contracted for has been increasing. By today's standards the 650 is very small.

A large computer will greatly facilitate the following objectives:

- (1) Accomplishing a greater workload;
- (2) Utilization of advanced statistical techniques in data collection and estimation;
- (3) Utilization of advanced econometric and statistical techniques to enhance economic research and to provide better information for formulating agricultural policies;
- (4) Reduction in the time span between collection of data and the release of estimates; and
- (5) Obtaining a higher standard of accuracy in the processing of data.

In other words, the principal argument for a large-scale computer is that of advancing the research and statistical work of Agricultural Economics. The relative time and cost advantages of a computer are generally much greater when complex processing or arithmetic operations are performed than when processing operations are simple.

The proposed equipment configuration is an IBM 1401/7072 combination.

The 1401 will be a small satellite computer that will be used primarily as a converter of information from punched cards to magnetic tape, as a printer, and as a processor for some small jobs.

Characteristics of the 7072, which is the main frame, include the following:

- (1) Storage: 5,000 10-digit words or 50,000 digits expandable to 30,000 words or 300,000 digits.
- (2) Tape units: Six tape units expandable to 20.
- (3) Floating decimal arithmetic: Hardware for performing floating decimal operations is a built-in feature.
- (4) Read-write overlap: The proposed computer is capable of reading or writing while computing.

(5) Modularity: In addition to the expandability of the storage and the number of tape units, the capacity of the system can be expanded in other ways, the principal one being expansion to a 7074 system which is basically a higher speed and larger computer.

The initial size of the proposed computer is roughly the equivalent of seven 650's. Target date for installation has been set for May 1963.

The feature of modularity was a major criterion in the choice of equipment because our pattern of conversion to automatic data processing is one of gradual transition rather than a sudden conversion of all data processing work. However, the proposed change to a larger computer is a big one and of such magnitude that a groundswell of interest, a cooperative attitude, and enthusiasm are needed. At the same time we should recognize that patience is also needed and that a substantial effort and reorientation on the part of all of us is required.

It is important that professional economists and statisticians be generally familiar with the capabilities of an electronic computer if they are to utilize the potential that may be available for improving their work. It is important that we keep in mind the fact that an electronic computer is not a brain. It is an assembly of hardware -- a very powerful piece of equipment for processing data in accordance with instructions or rules that are prescribed by man. The person who knows the data and the problem must either write the computer program himself or be able to communicate effectively with data processing technicians who will prepare the computer program. The matter of the best organizational setup for getting computer programs designed, written, debugged, and operating continues to be debated by the experts.

Personally, I favor having most of the programming done by professional programmers. Computer programming is highly specialized and programming techniques are changing rapidly. However, regardless of who actually does the detailed machine programming, at least three important points stand out: (1) subject matter specialists should have some training in programming and understand what programming is all about even though they may never write a program; (2) the data processing center should provide professional ADP leadership; and (3) a high degree of cooperative spirit and avoidance of jurisdictional conflict are needed.

There are some rules of thumb or guidelines for deciding whether a job is a good candidate for ADP processing. For example, a matrix may need to be larger than a certain size before it is usually advantageous to invert it by ADP; but the general question is not

easily answered. The amount of programming required and other costs of getting a job ready for processing on a computer vary widely from job to job. These are significant factors determining feasibility. As practical guidelines cannot be given for general use, I suggest that you confer with a competent and reliable data processing specialist for guidance -- not one who is prone to do everything by ADP but one who is able to provide sound estimates of costs.

In the remaining time, I would like to sketch very briefly a possible overall ADP approach to the survey work of SRS. This seems relevant as ERS is a major user of SRS output and also collects some primary data. My remarks should not be interpreted as a reflection of any SRS plans. Rather, they are indicative of how revolutionary ADP can be when one thinks in terms of an entirely new approach and a completely integrated system. There are many ways of doing a job but here a few general concepts of a totally integrated system making use of ADP.

A master file, or files, in the form of magnetic tapes could contain the names and addresses, identification information, and relevant historical data as basic records on all farms and business enterprises that are maintained for current sampling purposes. A high speed computer could, as needed, select from the master file, a sample for a specific purpose in accordance with specifications of an efficient sample design. Questionnaires could be addressed and coded using suitable equipment for that purpose. Returned questionnaires would be collated with the master file as part of the job of processing, which includes editing, adjusting for non-response, and the arithmetic operations for obtaining estimates and tables.

This gives the general idea in a few words. How can it enhance statistical work? The answer is that with ADP much more advanced and thorough procedures can be used than are possible when the methodology is limited by what can be accomplished practically by manual operations. Better sample designs; greater efficiency in the handling of mailing lists; more elaborate and objective procedure for editing data including substitution for missing values; adjustments for differential response by type of farm, size of farm, or other relevant characteristics; the use of more complex estimation formulas; the computation of sampling errors; and a greater variety of tabulations become practical and economical with the aid of a large, modern computer.

Burton L. French, Farm Economics Division:

Econometrics is the use of economic theory, statistical theory and mathematics, merged together, to provide a tool for research and policy. The first factor of importance in making the greatest use of automatic data processing is orderly planning of the research project.

I have block-diagramed this preparatory work as a particular flow chart. In my experience in ADP, you have to properly think through your entire project. Only when you work this out step by step, can you make the greatest utilization and provide the information necessary for the programmers and the system people to give you the greatest help. The first step is the question of actually determining the economic problem that you have under evaluation, and the second step is to define the problem.

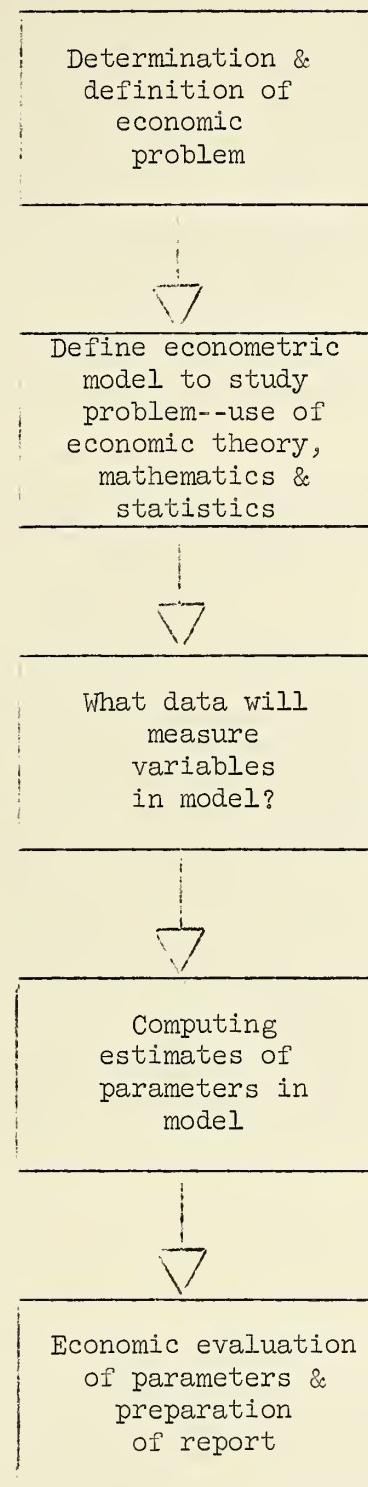
Before we have collected any data, we need to determine what is the economic or econometric model that we are going to use for the analysis. After you have defined the model, what data are you going to use? What measurement will you get that represents the variable that you have under study?

After collection of data, you have many sources of input into the computer to estimate your parameter. One important point is that we will have with the new equipment in Washington -- and many of you have the equipment in your own field stations -- a library of data that is more readily available than ever before.

With this equipment we can actually come out with publishable tables. This was one of the criteria that was used in selecting the computer we have on order. Then we make an evaluation of the parameter to the estimates of the parameter. Are these realistic? Do you get something that economic theory tells you should happen or is it the reverse? Do we have to go back and look again at the theory or can we say that this experiment that we have performed is realistic? At this point there is a possibility that we will need return to the computer itself and do more computation. And then, of course, we have our final published report.

We have, in essence, nothing more than the clerk at the table with an "in" box in one corner and an "out" box over here and the work going through the clerk. But, instead, you have now enclosed the whole operation in a black box.

What can we do now, with ADP, in choosing our economic model and the variables that we will incorporate in these models? With the computer it is feasible to incorporate a great many more variables and test the estimates. You then either add or subtract from them, because recomputation is fairly simple.



I think this is best explained by an illustration we put into the report that demonstrated our need for a computer in ERS. If you take a five-variable, multiple regression problem with 25 observations, a clerk can solve it in 7 hours. On the IBM 650 we would spend 15 minutes keypunching, 5 minutes proofreading, 15 minutes computing time, and 5 to print the report, or a total of 40 minutes against the 7 hours. This would permit us to modify, run various computations and test our alternatives. In many of our programs we have this opportunity now. With the clerical operation you were computing just a single point within the statistical region. Now, with the computer, we can make minor alterations and compute many points within the region and make comparisons between the estimates. This will improve the results and we are going to have a much greater knowledge of the economic system.

Another example is to look at the question of the budgeting process vs. linear programming. In budgeting we would compute estimates for a few points, make the comparisons, and select the one that had the greatest maximum income. Linear programming makes all the computations, all the considerations, and comes out with the most profitable point. But with the computer we find how our estimated data operate; we can get the effects of variable costs and variable prices; we can vary our resources to see how far these variables can be changed without making any change in the results. Also, we have not just a fixed number of alternatives for a particular farmer; we can drop out variables, we can expand, we can elaborate, and we can subtract and add. For example, we have a farmer that does not care about dairying. What is his other alternative? In one of our problems we estimated that it would require 100 days of a clerk's time to compute a linear programming problem with 45 restrictions and 150 real activities. If we put it on the IBM 650 it took  $2\frac{1}{2}$  hours. At that point, because of the size of the data, we obtained an incomplete solution. We shifted over to the 7090 machine with a much more powerful program and the time required was 10 minutes. We could run additional computations in from one to two minutes, whereas, with clerks you would have to use another 100 days for each additional computation. We can get quantification of our economic system in such magnitudes that we ought to be able better to describe the economic system and to predict what is likely to happen.

As information retrieval and what ADP can do for this problem, there is a task force in Washington now, working on library information retrieval. The question is, is it feasible for us to set up some type of an ADP system in which any one of you can send in a request for name, author, and abstract of publication in a particular subject matter area. They would be able to, in a matter of minutes, get from their library magnetic tape a list of all the available publications, articles, reports, books, with an abstract on each, and mail it back to you so that you could determine where the best source of information would be.

The second is information retrieval from the standpoint of data. We are now punching all of the land use data from the last five censuses on cards. This will be available so that information by counties can be obtained by just sorting the cards and relisting. We will have in a library storage the output from Statistical Reporting Service, in which we can call for a re-sort of their tape and relisting of the data. We spend a tremendous amount of time copying data from publications, copying it from work sheets, and just moving it from one piece of paper to another. We can turn all of this over to a machine and have available in a shorter time estimates for our econometric models.

With this, we can make automatic data processing work for us in economic research, and keep the machine from making us work for it.

#### Some Developing New Areas

Waugh:

About a year ago the Research Review Committee called attention to eight areas that needed increased attention. These areas were: supply of farm products, demand for farm products, long-term projections, bargaining power of farmers, relation between agriculture and general economic policies, economics of development, world trade, and alternative methods of implementing research results. The committee recommended that study groups be set up to consider work underway or needed in these areas.

Soon after this report was made, Dr. Cochrane asked us to set up a study group on economic growth. Such a group was set up under the chairmanship of Jim Cavin. Soon thereafter Mr. Koffsky set up two additional study groups -- one under the chairmanship of Winn Finner dealing with the bargaining power of farmers, and the other under the chairmanship of Tony Rojko dealing with the supply of farm products. In a memorandum to Division Directors, Mr. Koffsky outlined the work of these study groups as follows:

"We plan to designate from 5 to 7 persons to take part in each of these groups. Each group will probably meet about once a week for an hour's informal discussion of research problems in its particular area. I hope that each of these groups can finish its job in not more than 6 months. The main purpose of these discussions will be to stimulate new thinking, to generate ideas, to make a critical and uninhibited review of our past and present research in these areas, and to recommend improvements."

The three study groups have now been at work for about 6 months. It is time to look at their progress and to see what should be done next.

In reporting the progress of his study group on supply, Tony Rojko said, "We spent the first 3 months chasing rainbows." This could be said of the other two groups also. All three groups found it necessary to spend about 3 months deciding what the problem was they were to study, getting concepts straight, and arguing about theory.

I think there is some disagreement in these groups about the importance of theory. Some individuals are primarily concerned with recent technical refinements in pure theory, and would emphasize research that might throw light upon some of these theories. Other individuals are more concerned with fact finding, and would urge much more gathering of statistics and other factual material in the hope that they would help us understand the problems.

One of the members of the group on bargaining power put it this way:

"There is an apparent conflict of views over the primacy of theory and 'practical' operating information in orienting the research project. None of the group suggests that a 'complete model' can or should be developed before going out to acquire data. Nor does any of the group argue that useful answers can be developed without at least implicit theoretical foundations. But there is dispute, as I see it, on the probable fruitfulness of 'new' theory (e.g. of games, organization, or growth) in the typical or general class of bargaining power problem.

"This issue cannot be resolved until there are serious efforts by able investigators to utilize the 'new' theories."

I think this is an excellent statement. Many modern economic theories and economic models are practically untested. There is a crying need for some real econometrics in the original sense -- that is, a combination of mathematics with statistics and economic theory to help us understand how the economy does operate and to suggest things we might do to make it operate better.

None of the three groups has completed its work. At this stage I can only give some indications of what I think some of the tentative findings will be.

Jim Cavin's group on economic growth has written several drafts of a report dealing with the contribution of agriculture to economic growth at home and abroad. The present edition is 64 pages long, most of which is historical in nature, dealing with past contributions. The group is now struggling with the more difficult question of future contributions of American agriculture to economic growth in a period when agriculture has obviously become a small part of the total economy.

Bargaining power of farmers is an area which is especially hard to define. It involves at least two subjects: first, the structure of industries handling agricultural products; and, second, the behavior of these industries, including such matters as price-making.

The group has indicated that the ERS research in this area is too scattered. There are practically no projects on bargaining power, as such. Incidental attention may be paid to bargaining power in connection with a wide variety of research projects all over ERS. The group has discussed the possible need for some kind of interdivisional studies, with perhaps some kind of team approach similar to what is being used in operations research.

Basic to research in this area is an analysis of the appropriate levels of farm income, or parity income for agriculture. Some would question, for example, whether we ought to give farmers more bargaining power on the grounds that many of the most successful commercial farmers are already making very good incomes.

Tony Rojko's group on supply of farm products in a recent progress report said the following: "In spite of stimulating articles and conferences, there is a big gap in this field. Surprisingly little is available to provide forecasts or program appraisal." I have read some of the articles and attended some of the conferences, and I must agree with this statement. The learned articles do not help us too much when we have to make specific estimates. Some of us a few days ago were called upon to estimate how much the production of certain crops would expand if we allowed them to be grown on diverted acres and made a partial payment. Among the crops were such items as guar, sunflower seed, and safflower. Fortunately it turned out that a few people in USDA knew something about these strange crops and were able to make some useful estimates of possible increases in supply. Still, it is clear that we do not have much quantitative information about the effect of various factors upon the supply of even the major farm products.

Tony's group said that there may be too much emphasis upon models that are "conceptually superior, but not operational." This is an interesting observation. There is a similar situation in the

field of demand. If we want a model that is conceptually superior, we might well give attention to the models of Walras and Pareto. These models require a demand curve for each individual and for each commodity and service. Such a model is doubtless conceptually superior, but it is not operational; that is, it is not workable. Nobody would dream of trying to develop a Walras model with actual statistics.

There appear to be at least three different kinds of supply studies that are needed:

- (1) To describe the adjustments that occur on individual farms or types of farms.
- (2) To find the most profitable adjustments on individual farms or types of farms (using such means as budget analysis and linear programming).
- (3) To explain changes in national aggregate supplies.

Several members of study groups have given me some individual comments. I would like to pass on the comments made by two persons. The first comes from a member of the supply group.

"Some members of the group work directly with supply analysis; others do not. Those of us in the former category tend also to work with particular theories or techniques, and there is a natural tendency for us to defend our preconceived ideas, hopefully with justification. This is healthy. Heated discussions are often the most fruitful. But I also feel that some of our discussions have approached a tendency to convert an intelligent defense of a technique to an offensive questioning of another technique that would presumably endanger the appraisal of the first.

"Despite my keen interest in supply analysis, I have not devoted as much time to the study group as I should. We're all in the same boat. Either we put other things first by choice, or we just don't have complete freedom of choice due to other demands on our time. One such 'demand' might arise from the need to show personal progress via bulletins or other reports, a need which is sometimes a major thought in our minds if we are to move up the grade ladder. Therefore, I have wondered on occasion whether a really effective product can come from a study group without the members devoting full or near-full time to that project. This alternative to our present set-up, though extreme, should at least enable the group to complete the job much sooner. I am not advocating the idea but rather noting what is probably obvious but worth consideration in evaluating study groups in general."

The other comment comes from a member of the group on economic growth.

"I respectfully submit, therefore, that we encourage the force -- the curiosity, the conflicts and concordance of ideas, the drive to break out into the open space of limitless conceptual exploration -- by placing less emphasis on regular reports than on conditions that encourage the operation of the force.

"In my mind it is the creation of these conditions that will be all-important if the study group concept is to succeed. Many things comprise these conditions, some tangible, others not so tangible. Among the most important I would include the following:

"(1) First, a deep conviction on the part of the Administrator and the Director that the system will work;

"(2) Communication of these convictions to working group members and all other staff members -- inspirational communication;

"(3) Careful selection of areas of study;

"(4) Careful selection of group chairmen to guide the groups toward fruitful exploration; and

"(5) Constant exhortation of study group members to do their 'homework' and do it well, for their efforts are important and their contributions needed and appreciated. In the last analysis, it's the spirit of seeking knowledge that we need to feel ourselves and then instill into others if we are to succeed in any research undertaking."

All three study groups would like their time extended in order to finish their review of research and to make suggestions for improvement. I think their time should be extended until about September for this purpose. I think, however, that each of these study groups should wind up its work as soon as it can do a good job. My experience is that the marginal returns from this kind of work drop very rapidly as the time increases.

You will remember that these study groups have two assignments. One was to stimulate new thinking and generate ideas. This part is very interesting and good, clean fun. It is harder to get down to the other part, "to make a critical and uninhibited review of our past and present research in these areas and to recommend

improvements." I think the test of success of these study groups depends upon their ability to bring forward some constructive and practical suggestions for improving our research.

When these three study groups wind up their operations, we should think about possible need for other study groups. I hope that the personnel of the present three groups will be good enough to work setting up additional groups. Before that is done, we should look carefully at the list of topics suggested by the Clodius committee a year ago and should consider other topics. One that occurs to me is advertising and promotion. I recently attended a very interesting conference on this subject in Ken Ogren's division. Clearly, that division needs to do some research on advertising. But when agricultural products are advertised or promoted, we need research on demand, prices, farm management, and costs if we are to measure the long-term effects upon agriculture.

#### Discussion

Bob Clodius said he was very well pleased with the progress made by these three study groups. He suggested that we go ahead with this program and that serious attention be given to the findings and recommendations of all such groups.

Nate Koffsky agreed that the study groups were doing a good job, and indicated that he would like to have them continue until they have finished their evaluation of research and made suggestions.

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Note: On June 21, Mr. Koffsky wrote to each member of the three study groups. A sentence from his memorandum was:

"I am asking each of these groups to continue until the end of September 1962 in order to finish its review of ERS research and to give us its frank and uninhibited suggestions for improvement."

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Burt French asked whether the reports of these study groups are to be published. In answer to this question, Jim Cavin indicated that the report on economic growth probably will be published in some form. Fred Waugh indicated that we do not have any present plans for publishing the reports of the other two study groups.

Rural Development

John H. Southern, Farm Economics Division:

Coordination means many things to many people. It can vary from a mere casual conferring between persons on an administrative or research question or it can become the objective of very high level directives. It can be merely a directive for a person to check with another on some matter; or it can be a Congressional mandate.

I conclude what ERS is attempting in the manner of coordination might be labeled as a "process of administrative change." In other words, the agency is attempting a new technique in administration through committee coordination. To understand this we must examine more closely what we mean by coordination.

There is a certain amount of coordination with the review of work and line projects to keep a "harmonious adjustment" of coordinate parts. I would hazard a guess that most coordination has been of this nature. Also, coordination can mean the "keeping of ranks or order without subordination." Basically, ERS coordination has another meaning, that is, "to bring into common action or condition." It is from this viewpoint that we more nearly approach what can be an effective effort in administrative change through coordination. Thus, in our work in rural development, coordination means to bring our interrelated research into common action through a mutual understanding of the problem -- in other words, bringing a number of fragmented research efforts into an interrelated whole.

The attack on the problem of rural development must be a coordinated, unified effort for two reasons: (1) the basic socio-economic conditions of persistent area and family poverty demand the contributions of several disciplines toward understanding, and (2) our research resources are of such magnitude that if coordinated, real progress on basic knowledge and subsequent policy can be made in a relatively short period of time. In our case the matter of coordination concerns direct, interrelated research from three branches of three divisions: the Market Structure and Cost Branch, ME; the Farm Population Branch, ESA; and the Rural Development Branch, FE.

In our case the task has not been one of organizing and initiating a program of research as there were some 28 to 30 line projects already on the books. These are projects that in general are from one to as many as five years in duration. So, first, coordination has had to proceed from a point where we are, with many active projects which may or may not have been prepared under a common understanding of the rural development problem. Accepting this condition, we have proceeded by mutual study of

the various types of activities, attempting to arrive at some basic understanding of the rural development research needs. We are attempting to arrive at a better understanding of the overall coordinating task through a review and study of work and line projects.

A second step in our review of rural development research involves a rural development research seminar just two weeks from now. At this seminar, we shall have the consulting services of several of the country's outstanding students of low incomes and area and regional development. Representatives of our three branches will informally discuss our research program and current and emerging problems as well. These outside consultants, I am sure, will do a great deal toward assisting us in a common understanding of developmental problems and will furnish us with additional basic viewpoints around which to reorient, redirect and come up with a program of coordinated research.

An area of coordination which has been effective over the past several months concerns the programming and policy side of rural development. Through coordination, the rural development efforts of the Department (Office of Rural Areas Development) and of the Area Redevelopment Administration has had a channel through which to submit requests for informational and consultative assistance, and for pertinent research results. This area of direct program-related activity will expand as more basic answers are needed to questions involved in program alternatives and operations.

We have reviewed one concept of coordination, what we have done and what we need to do. An evaluation of how effective we have been is difficult. It is one thing to bring about coordination that merely exchanges papers. It is another to have a mutual research approach and a research program that springs from a common understanding of the basic investigational problem. Coordination of the latter type must come as a result of our cooperative efforts over a period of time and must be evaluated in this context in the absence of coordinating instructions that spell out a "you shall" directive. We are moving toward the two-fold objective of coordination as stated by the Administrator: "(1) To determine the causes of low levels of economic development and low incomes which characterize large areas of rural America, and the interrelationships among causes; and (2) to ascertain and evaluate alternative policy and program solutions to these problems as these solutions are functionally related to one or more of the causes, and to analyze and evaluate obstacles to solutions." These objectives are broad enough for interdivision approaches, yet sharp enough to guide coordination of research toward problem understanding and solution.

Economic Projections

Rex F. Daly, Economic and Statistical Analysis Division:

The economic projections work of the Department of Agriculture is not new. In fact, economic projections are a vital part of the whole field of economic analysis. The Department of Agriculture has been actively participating in longer-run appraisals of prospects for agriculture, at least since the postwar series on "What Peace Can Mean for American Farmers." The regular work on annual outlook, of course, goes back to the early 1920's, as you know.

The basic importance of work on longer-run appraisals has long been recognized by policy makers, program administrators, and other agencies making longer-run commitments involving resource development, conservation, long-term loans, etc. The present emphasis on economic projections is a recognition of this need for frequent longer-run appraisals as a basis for determination of long-term policy for agriculture and as a basis for analyses of the effects of alternative programs on farm production, prices and incomes.

The present concern of the ERS Committee on Economic Projections involves the preparation each year of an intermediate-term projection for agriculture -- a 5-year projection. This appraisal would be prepared in considerable detail and presented at the Annual Outlook Conference. The primary objective is to provide a basis for appraisal of current programs and the development and analysis of proposed alternative farm programs. This directly assists administrators in bringing about the conditions necessary for growth and resource shifts in the agricultural sector of the economy and will indirectly aid other public and private groups interested in agriculture.

We are also concerned with longer-run projections of possibly 10 to 20 years or even longer in some instances. These may be in somewhat less detail than the intermediate-period projections and will be of primary interest to groups concerned with resource development, conservation, land appraisal work, credit needs in agriculture, etc. Virtually every agency in the Department of Agriculture and virtually every Department of the Government is interested in economic projections relating to the general economy and to major sectors of the economy. Furthermore, private business groups and others concerned with agriculture as a market are obviously interested in speculations regarding the future growth and prospective incomes in the agricultural sector of the economy. In this connection, the projections work is of continuing concern to the Forest Service, the Soil Conservation Service, Bureau of Land Management, and the Corps of Engineers, for example.

Recognizing the basic continuing need for economic projections as an aid in appraisals of current policy programs and in the development and analysis of programs for agriculture, the Administrator of ERS in October 1961 established the ERS Committee on Economic Projections. This Committee was directed to coordinate the projections work of ERS, develop uniform basic assumptions, target dates and methodology, and to prepare each year a 5-year projection of domestic and foreign demand of farm products, farm output, farm prices, farm incomes and other related data under various economic and policy assumptions.

The Committee on Economic Projections consists of a chairman, Chief of the Outlook and Projections Branch, and of a representative from each division of the Economic Research Service. This committee has already been through many of the pains of organization and development of operating procedures. It was quickly recognized that assignments of this type which cut across division lines will directly and indirectly involve division directors and may commit a part of the staff of each division. Division directors recognize the problems of this type of assignment but they also recognize the importance and high priority of this type of work. We are shaking down in this first year of operation. We have had problems and will continue to have problems, but we do not anticipate any real difficulties in ironing out our organizational and operational problems.

In addition to the projections work of the Department of Agriculture described above, there was more recently launched an interdepartmental projections program under the imposing title, "Economic Growth and Employment Opportunities Project." This is a governmentwide committee on projections with overall direction from the Council of Economic Advisers and with membership from all agencies of the Government. Our ERS Administrator is a member. The general administration of the Economic Growth and Employment Opportunities Project is under the Bureau of Labor Statistics. They provide the overall coordination and direction of the project, but much of the work is carried out by the agency concerned and by research groups, universities and other private agencies. The Commerce Department, for example, is developing the input-output framework for the general economy. ERS is developing a similar input-output framework for agriculture consisting of 15 to 20 sectors which will be integrated with the general input-output framework. The objective of this interdepartmental committee is to develop -- governmentwide -- a systematic analytical framework in which to prepare 5-year and 10-year projections of key economic measures for all major industries.

Since its organization, the ERS Committee on Economic Projections has met regularly to discuss problems of organization and general operating procedure. Each division representative has been

given the responsibility for subcommittees and study groups in his general area of work. In carrying out this assignment, the projections committee has been authorized to draw on the best available talent in every division of ERS. Accordingly, study and work groups have been appointed and are actively functioning in the following areas: (1) domestic demand, (2) foreign demand and agricultural exports, (3) yields, output and supply response, and (4) final product demand, processing and marketing services.

In addition to ERS membership on these committees, the projections committee has requested participation by other interested agencies, such as Statistical Reporting Service, Agricultural Stabilization and Conservation Service, Foreign Agricultural Service, etc. The work groups are presently concerned with development of the detailed projection and appraisal of the course of agriculture during the next 5 years. A report on this work is due by the first of September. Following this deadline, it is planned that the committee will continue to function in studying data requirements and in the development of research on methodology.

#### Foreign Economic Development Research

##### Raymond P. Christensen, Development and Trade Analysis Division:

The fact that the new branches of ERS have coordinating committees to assist them in developing their research programs probably means different things to different people. In the case of the Economic Development Branch, I think it means (1) that other organizational units of ERS have specialized talents, skills, and experience that can contribute much to the building of an effective program of research on foreign economic development problems, and (2) that other organizational units of ERS have an interest in foreign economic research because of the contributions this research can make to their research programs, and (3) that most economists are deeply interested in economic development research.

It has become quite evident to most thinking people that we have a large stake in the future economic, political, and social development of foreign countries. Research on agricultural development is important because most of the less developed countries are chiefly agricultural and their economic growth will be influenced greatly by economic progress in agriculture.

Economic benefits can result to a country from expenditures for foreign economic development. Research on foreign economic development and trade can be defended on the basis of promoting the interests of U.S. farmers as well as the general public.

We have classified our research on foreign economic development problems in four areas:

- (1) Agriculture in foreign economic development programs is concerned with analyses of the relation of agriculture to general economic development or what often is referred to as the role of agriculture in economic development.
- (2) Effects of foreign economic development on patterns of foreign trade. Here we are concerned with changes in international trade patterns that accompany foreign economic development and what these may mean to markets for U.S. farm products.
- (3) Impacts of foreign production, price, and marketing policies on agricultural development and trade. Most foreign countries have programs affecting production, marketing, and prices of farm products. We are interested in learning how these programs affect markets for U.S. farm products as well as how they affect agricultural progress of foreign countries.
- (4) Impacts of rural institutional arrangements on economic development in foreign countries. We include under this heading institutional arrangements affecting land tenure, ownership and use, taxation, credit, marketing, and price-making forces. Much of what we are concerned with here usually is classified under the general heading of agrarian reform.

Some people have said after we have described these four areas that it doesn't appear that we have omitted anything. We recognize that there is considerable overlapping between the four areas. But that doesn't bother us; our objective is to conduct analysis on important problems. If a person's analysis takes him beyond his assigned area, we will not worry about it as long as his analysis promises to yield useful results.

We don't have enough research resources to do all the research we would like. Currently, we have a staff of six professional people located in Washington, D. C., but some have been on the job less than a month.

Foreign currencies made available under Sections 104(a) and 104(k) of Public Law 480 for research contracts and grants will be an important means for carrying out economic research in foreign countries. Foreign currencies made available under Section 104(a) are administered by the Foreign Agricultural Service and can be used for conducting studies that relate to foreign market development. We have an allocation of funds from FAS for studies of the economic effects of P.L. 480 programs in foreign countries and for studies that relate generally to economic development and

trade possibilities. The Regional Analysis Division, our sister division, has an allocation of funds from FAS for studies of long-term supply and demand projections for agricultural commodities in foreign countries.

Foreign currencies made available under Section 104(k) are administered by the Foreign Research and Technical Programs Division of the Agricultural Research Service. They can be used for a variety of studies relating to foreign economic development and for studies that provide findings applicable to economic problems in the United States. We hope to finance some studies in all of the four areas described above from these funds. Currently, economic studies are being conducted in Finland, Colombia, and Israel under the research grant program. Section 104(k) funds have been allocated to ERS for making research grants in Egypt, Turkey, Israel, Pakistan, India, Burma, Syria, Spain, Brazil, Chile, Peru, and Poland in fiscal years 1962 and 1963.

This brings me to the important role of the ERS Committee on Foreign Economic Development. On October 19, 1961, the Administrator issued ERS General Memorandum No. 7 which assigned to the Economic Development Branch responsibility for research on foreign economic development and for coordination of ERS research conducted in foreign countries with funds made available through the Agricultural Research Service under Sections 104(a) and 104(k) of P.L. 480. This memorandum designated a committee with members from each division of ERS "to assist in developing a broad program of research on foreign economic development and in coordinating all ERS economic research conducted under Public Law 480."

On March 7, 1962, the Administrator issued a memorandum to division directors which provides that all line projects covering research conducted by the funds referred to above be located under project DTA-1, the work project covering research on foreign economic development. This memorandum also provided for recognition of the interests of other ERS divisions in foreign economic development research projects because of relevance of findings to their work.

We expect that ERS research financed under Section 104(k) will increase greatly during the next year and that need for consultation with other divisions also will increase. I have just returned from a trip to the Middle East and to Southeast Asia where I looked into possibilities for carrying out research on agricultural development problems. There are well-trained agricultural economists in Egypt, Israel, Lebanon, Thailand, Philippines, Taiwan, and Japan who would welcome opportunities to carry out research on economic development problems in their countries with the use of P.L. 480 funds. Among these countries, we currently have funds only in

Egypt and Israel. Dr. K. L. Bachman, Director of the Development and Trade Analysis Division, recently was in Spain, India, and Pakistan where we have 104(k) funds for financing economic research projects.

The Agency for International Development has indicated an interest in our research on foreign agricultural development problems. We have discussed with them a proposed research project on agricultural sector planning. It would be concerned with performance of the agricultural sector under development phases in the past and with identification of obstacles or hindrances to agricultural development. We need to consult with our coordinating committee before completing the write-up of this proposal. The project would be carried out over a period of several years under a transfer of funds from AID. I believe it would require that ERS economists be located abroad on 1- or 2-year assignments to carry out needed studies. If this proposal becomes active, I hope that some of the best brains in ERS can be made available to go abroad on 1- or 2-year assignments to carry out research on agricultural development problems.

Finally, I want to point out that the Economic Development Branch also has responsibility for foreign training programs in economics and statistics. Programs and itineraries for economists and statisticians who come to the United States for training or experience under U.S. Government sponsored and other programs, are prepared by professional people in our branch. We call upon experts throughout ERS and SRS in the field as well as in Washington, D. C., for assistance in carrying out this work. We greatly appreciate the cooperation and assistance we receive throughout ERS and SRS in carrying out the foreign training programs. Foreign economists and statisticians who have received training and experience in the United States can be very helpful in carrying out our programs of research on foreign economic development problems.

Y PROSPECTIVE AGRICULTURAL PROGRAMS  
AND ECONOMIC RESEARCH NEEDS X

John A. Schnittker, Staff Economist Group, Chairman

Schnittker:

My copanelists here tonight are Linley Juers and Grover Chappell from the Staff Economist Group.

I'm sure that we were not invited to be on the program to talk about economic theory or to talk about particular economic research needs. Willard Cochrane sometimes calls the Staff Economist Group his political economists, and since we have been more or less involved in some of the practical application of the research which economists in the Department and elsewhere have been doing, we want tonight to spend a good deal of time talking about the practical problems that have been faced in the last year, particularly in the last few months, in the development and the furthering of legislative proposals in Congress.

First I want to say just a few words about the role and the place in the organization of the Staff Economist Group. We serve as a sort of personal staff to Willard Cochrane, who is Director of Agricultural Economics and also primarily economic adviser to the Secretary. In effect, we serve as a sort of additional arm of the Secretary's Office. Our role and function can best be described as a buffer, as a liaison, as a means of communication between highly competent but highly technical economic research and analysis and the people at the policy level -- the Secretary, the Under Secretary, the Assistant Secretary, Willard Cochrane, and others who make decisions on public policy. Many of you sitting here tonight have been of great assistance in the last few months in the development of these legislative proposals and in putting them into effect in some cases.

I want to call your attention to some aspects of research which perhaps some people questioned would ever bear any fruit so far as any actual policy development was concerned. Yet, as events moved along, proposals were made for different kinds of programs, and research which once was somewhat academic suddenly became very useful. Two examples of research started many years ago which have borne a good deal of fruit in the last year or so in agricultural policy development are: (1) projections of the demand and utilization of agricultural products, which have served to a very large extent as a basis for the current estimates of utilization upon which the Secretary and his staff place a good deal of reliance because of the sustained effort that has been

put into this type of research over the years, and (2) the work done by the Department for the Senate Committee on Agriculture and Forestry in the late summer and fall of 1959 -- the so-called Ellender study -- which was an effort to project the effects in terms of output, utilization, agricultural prices and incomes of going to a basically free market situation in agriculture. This, coupled with work in progress at Iowa State and at Cornell, has resulted in a consensus on the effects of dropping all or most all of the price and income support programs and production adjustment programs, which has had a great deal of effect on agricultural policy, not only in the '60's but also in the 1950's.

I want to turn now to some of the problems which were faced by the Department in helping to develop the policy and program proposals which are incorporated in the Food and Agriculture Act of 1962, now pending before Congress. The really significant analytical problem faced in connection with the Food and Agriculture Act of 1962 was the question of what really are the prospects for supply and utilization of major agricultural commodities in the United States in the next 5 or 10 years, and particularly with feed grains, including indirectly the livestock sector, and with wheat. The analytical question was: Is the extreme productive capacity which we seem to have a real thing or is it a mirage? Is it something that will soon go away? Falling back on the work and experience of people in the Department and land-grant colleges, the consensus which I mentioned earlier was agreed to that this productive capacity is very large, that it is with us at any reasonable level of prices, and that the American farmer could and would literally snow the economy under with farm products if he had the opportunity and if there were no production adjustment efforts.

On the second question of utilization, the consensus was that in our high-income economy, utilization is going to follow population to a large extent. Chart 8 in the publication "Food and Agriculture Program for the 1960's" shows the difference between production and utilization of farm products in the aggregate in the last 10 years, with a projection made by people in the Economic Research Service of the probable consequences in the next 5 years if there were no production adjustment efforts taken. This projection is really the basis for the proposed wheat programs and the feed grain programs, which would give the farmers a choice between (1) limiting their production so that this gap between production and utilization would be closed, or on the other hand, to take their chances in the marketplace and accept the price consequences of having turned down the production adjustment program.

Some newspapers say that the Department has proposed a really revolutionary feed grain program. The Department has countered, in the Secretary's statements, that the mechanisms and the principles

embodied in the feed grain programs are really very conventional mechanisms that we have had for many years in the wheat program, the tobacco program, the cotton program, peanuts and rice -- acreage allotments, national marketing quotas, penalties for production of excess acres, etc. And this is all true. Marketing quota penalties were a part of the Agricultural Act of 1938 as related to corn, but were never used because corn is different, being fed primarily on the farm where it is grown. In the hearings and in the discussions this year it was recognized that corn is different. But I do want to point out that the procedure is conventional and to grant that to some extent corn is a different kind of commodity, being marketed as livestock and not as the original basic commodity.

On wheat, we again have a very conventional procedure applied on the production adjustment side. The major flaw in the wheat program in the last 8 or 10 years has been too large an acreage allotment. But given the other parts of the wheat program, given the fact that we had it, given the fact that the price support level was set between 75 and 90 percent of parity, the real flaw in the program which, if removed of the 55 million acre allotment back in 1954, 1955 or 1956, could have saved us from having 1.4 billion bushels of wheat on hand. Removing this 55 million acre national allotment and putting the allotment on a formula is the major innovation production-adjustmentwise in the wheat program. On the price support side, the innovation proposed would be to put in effect a two-price or certificate plan which would be new so far as law is concerned but which is very, very old so far as proposal and discussion are concerned.

Linley Juers, SEG:

My responsibility falls generally in the livestock-animal category, principally on dairy, and on some of the poultry problems that have come up over the past year. On dairy, as you are aware, we had a monumental increase in the size of our surplus stock last year as consequence of both an increase in production and some decline in the consumption of dairy products. This has been one of the pressing problems we have worked on during the past year and I expect we will be working on for at least a year or so yet, trying to develop a sound dairy program which might replace the law presently on the books.

Another significant development of the past year has been the work on the turkey marketing order. In the act of 1961 turkeys were added as a commodity for the marketing agreements act, primarily on the basis that a substantial price decline was occurring on turkeys in response to about a 26 percent increase in output. It then fell to the Department to try to work out a turkey marketing order which would stabilize the marketing conditions for turkey producers.

We have worked with a broiler advisory committee, trying to develop a price stabilization program. Broilers found themselves in much the same situation as turkeys last year. We are just beginning to get into some consideration of the problems on eggs. Egg prices are lower than at any time since the '30's. We don't really understand all the implications of what is going on although some seem to feel we have had some decline in egg consumption during the current year which is precipitating the price problem. There seems to be pretty general interest in discussing what might be done about egg prices, but with little or no authority other than the use of Section 32 funds to stabilize egg prices.

As to some of the research implications of our experience, it occurs to me from the things we have drawn upon, that there has been quite a bit of research in the area of structural characteristics of the agricultural sector of the economy. Much of this has been oriented from the standpoint of justifying consideration of improved bargaining power for farmers; for instance, work done with the supermarkets and with the dairy industry which lays out a case that farmers are on the low end of the totempole bargaining-powerwise. There has also been considerable work on the mechanics of supply management and some quantitative measures of the implications of various forms of supply management or resource restriction programs. I feel a little hesitant calling up someone in ERS and saying, "We need an estimate which might well be done if you had two weeks and we don't need it until 11 o'clock this morning." But we have been able to come through with precise quantitative measures on many of these things; we have done a fairly good job of illustrating the directions in which budgets or prices or income would move in response to certain types of program alternatives that have been suggested.

But what are some of the secondary effects of some of these programs on the internal structure of agriculture? In dairying, how do various forms of allotment programs, involving across-the-board reductions of 2 or 3 percent, affect producers interregionally? In the southeast they have operated under State milk control programs, with tight supply management programs and strong penalties to keep surpluses down. These people look upon a national program as taking a second whack at them. There is jealousy between the fluid milk and manufactured milk sectors. The fluid milk people contend that where you have transferable allotments, all of the manufacturing milk will end up in the orders. And manufacturing areas say that the fluid people will buy up all of their allotments. We do not have the answers to such questions. Another problem is the nature of supply response in milk. Some producers are increasing, some are decreasing, and some are staying the same. Many producers feel that an across-the-board allotment program is a difficult thing to live with. It's very difficult to

analyze the impact of using an across-the-board allotment program. We are now trying to work some selective adjustment into these programs, including proposals for some voluntary adjustment. There are many variations that can still be studied before we have the answers to some of these problems.

On turkeys, it seemed convenient to organize a turkey program around some restrictions at the hatchery level, with only a small number involved. Yet the independent producers did not relish the idea of hatcherymen having control of the poultts and either forcing the price of the poultts up or deciding to grow the turkeys out themselves.

In broilers we have run into much the same thing. Members of the broiler advisory committee could agree that there should be some restraint on supply and that the restraint should be a tough and effective one. But you get a battle on the kind of program. A few independent producers feel that everything should be based at the farm. Then within the integrator section you have small and large integrators. The small integrators want to be sure that a program will not do away with the contract form of production, but at the same time they want it to be tight enough so that the big feed companies don't swallow up the small integrators.

Some of the same considerations are going to hit us on eggs. We will need to go through some type of committee, plus hearing procedure, before we are going to have a good idea as to what kind of a stabilization program might apply in eggs, if any. The biggest fear seems to be, what is going to be the impact of integration on the egg industry? They have seen what has happened to the broiler industry and have been amazed. Integration apparently is moving into eggs rather fast and may be a stronger motive for trying to put some curbs on the expansion of volume than the actual price situation is.

One other thing we continually run into is the argument of promotion vs. a price stabilization program. One of our big research needs is probably evaluating the real potential for promoting agricultural products and just what can be accomplished. We are faced with this in the dairy industry and in the egg committee. I have had quite a number of letters from people suggesting that promotion will solve the problem; other people suggesting that promotion is money down the drain. It seems to me that promotion is a somewhat longer-run program and to the extent that it may be effective and warranted, it may be a device which reduces the amount of adjustments that may be needed in a price support program. Yet, for lack of adequate evaluation and explanation, we get ourselves into a box -- should it be promotion or price support, rather than how may the two work in harmony.

Schnittker:

The next panelist is Grover Chappell, who works primarily on international problems.

Grover C. Chappell, SEG:

This Administration came in determined, among other things, to expand demand, both domestic and foreign, and with storage costs running well over a billion dollars a year, who could be against expanding exports? In our legislative program we did go up with a few amendments to Public Law 480. One would have allowed us to use commodities that were in surplus but not actually in CCC stocks in our foreign donation program. We very quickly lost that battle because it was difficult to convince Congress that this might not create surpluses where they don't actually exist. We have asked for some liberalizing amendments to Title IV of P.L. 480, which is long-range credit sales for dollars, contrasted to the soft or foreign currency sales that make up the bulk of our 480 program, but it does extend credit up to 20 years and, of course, as such, is not commercial terms. This long-term credit sales provision is fairly new and was hemmed in with all sorts of restrictions that made it more restrictive even than our give-aways and sales for foreign currency. But we have encountered little difficulty in getting this part of the bill through.

The Department also has a strong interest in the Reciprocal Trade Agreements Program, called the Trade Expansion Act of 1962. The prospects for considerable liberalization in this piece of legislation seem particularly good. A big help has been the great concern generated around the country about the possibility of the Common Market virtually closing its doors to us, particularly on agricultural products. We also asked for a minor amendment that would specifically allow for participation in multilateral food programs. Secretary Freeman, last fall, proposed a \$100 million, 3-year experimental world food program to the FAO. It was favorably received and the United Nations has approved it. We can participate without the amendment and, as it turns out, that's what we will have to do because the Congress did not look with favor upon us channeling a great deal of our foreign food aid through the United Nations system.

The Secretary is much aware of the need for food around the world. He asked for and received a good publication from ERS on The World Food Budget, which portrays the large needs of the world for food. At one time he had hoped that we could expand our exports considerably, particularly under our aid programs, and asked us to see what we could do with an accelerated program of

food for peace. After the Secretary went around the world last fall, he became convinced that in practical terms the world is not a bottomless pit in which we could move out any quantity of wheat or other food and fiber we might want to export. In estimating how much wheat acreage we would need for the next 5 years, we finally compromised at a level of wheat exports at about 550 million bushels under P.L. 480, which is a little higher than we have had over the past few years but not a great deal.

Dr. Cochrane at the moment is in Europe doing some informal negotiating and sounding out of possibilities of receiving favorable treatment for our agricultural exports into the Common Market. He apparently feels that it will be increasingly difficult to maintain our current level of exports into Europe. The Europeans are telling him that maybe the only way these problems can be solved is by worldwide international commodity agreements. We have never yet had international agreements that really had teeth in them. We have had a wheat agreement for years, but importing countries don't really make commitments that bind them or are meaningful. Such developments are going to require more research in the Department on long-range commodity projections than in the past. FAO carries on research on long-range projections and on food aid programs. But 90 percent of the food aid that takes place in the world today is financed by the United States and we, of course, cannot depend entirely on research done by FAO. I have a great deal of interest in research on appraising the impact of Public Law 480 or foreign food aid in various countries. So far food aid apparently has been quite successful in promoting economic development in the developing countries, but perhaps has been less successful as a means of surplus disposal. We find it is rather difficult to donate food under conditions which do not displace what they would have otherwise bought commercially. This doesn't mean that it is not good economic aid or that it is not in the interest of the United States to do it, but it is a limiting factor on the ability of these programs to solve our agricultural problems.

#### General Discussion

Schnittker:

In making public policy decisions, we are always limited, I think, by what we know. I trust that they will be better decisions if we know more than if we know less. The real significant problem for economic research in the early 1960's is to recognize the emerging problems of the late 1960's and the early 1970's to get the research going, to get the bulletins and the books and the ideas on the shelf so that 10 years from now we will have the consensus upon which policy decisions can be reached. Let's have the first question.

Southern:

John, why don't you address yourself a moment to other policy aspects. We have been dealing with turkeys, cotton, grain sorghums, etc. You know, part of the Agricultural Act of this year has a few other features, such as conversion of land to recreation purposes, loans, etc.

Schnittker:

I had hoped to do this in the question period. My own opinion is that probably the most persistent problem we will have is not the wheat surplus or the corn surplus, but the problem of unemployment, underemployment, and even the incapacity for employment among the rural poor.

There are two significant aspects of the Agricultural Act of 1962 now pending which were not mentioned. One of them relates to what would be done with the 40 or 50 million acres diverted from wheat and feed grains and, secondly, what can be done by way of long-term conversion of agricultural land into open spaces, forestry areas, recreational areas, etc. We have in the proposed program a pilot program of land use and development, plus loans and cost-sharing assistance through Rural Electrification, Farmers Home Administration, and other agencies, which would permit us to make a start in a pilot program which I hope would be evaluated and would bear some fruit in a couple of years in an expanded program to really use the land resources which would be diverted from the crops which are now in surplus supply. A second part of this would be loan and grant programs to help renew both the resources and the people of these bypassed low-income areas.

There isn't very much in the proposed Agricultural Act to expand the rural area development program, but there is at least a good intention and I think the possibility that something more significant can be done in future years.

Charles F. Kiefer, Executive Director, MOS:

Would you say a word about how an economist helps the Congress to report a bill out of committee on agricultural problems.

Schnittker:

I think it might be appropriate to say a word or two about the problems of getting the proposed Agricultural Act out of the House Committee this year. Those of you who followed it closely in the

papers probably read that the bill went to Congress on about the 6th of February along with the Presidential message. Some 50 or 100 thousand copies of the booklet "Food and Agriculture -- A Program for the 1960's" were distributed. Many meetings were held. Public hearings were held in late February and early March.

In March, the Committee began to mark up the bill, that is, to put in their own amendments to the original bill. Then as April opened, both the House and the Senate committees turned to executive sessions, leading toward a vote on the bill. The House Committee met almost daily for 2 weeks after the first of April. And we thought, confidently, that this bill could be voted upon and probably reported out of the House Committee by the 15th of April, the Friday before the House would recess for Easter. But upon counting the heads and associating them with votes in the House Committee, it was found that we didn't have the votes, and so it was necessary to go to the leadership and arrange to have some additional amendments made. The House Committee and the Senate Committee were in session on the 12th, 13th, 14th, and 15th of April, and it was thought that only the House Committee had a chance for action.

Suddenly, on the morning of April 15th, we got the electrifying word that the Senate Committee was going to move to a vote that day. It did, in fact, move to a vote. It voted to take the Administration's feed grain program out of the Senate bill by a 9 to 8 vote. And it voted also to substitute another wheat program in the Senate bill by a 9 to 8 vote, and the Chairman of the Senate Committee came out of there really raging and ready to get on the Senate floor to get it amended back.

But while this went on in the Senate, the House continued to procrastinate. Both sides, that is, the Administration and the opposition, on the 14th of April and the 15th of April, sparred to avoid a vote because both sides thought they didn't have the votes.

Congress didn't come back in until about the 24th. The House Committee then sparred for 10 more days, until about the 8th or 10th of May. From the 14th of April, over Easter, we had 17 solid votes for the bill. The opposition had 16 solid votes. And there were two gentlemen, one from Virginia and one from California, who had not committed themselves publicly. And so this went on for 3 weeks. I tell this as a kind of spectator because even though I was there at most of the public and closed committee sessions, I was there as the man to answer questions, not to count the votes.

Finally, on about the 10th or 12th of May it was determined that the vote had to come. There was an agreement between the leaders that a vote would be taken on a certain day. The vote was taken, and it turned out 18 to 17 that the bill was reported.

To mention some of the things that this turned on, there was a question at one point -- whether the wheat bill could be reported out by the full committee. Two Congressmen from specialized wheat areas made a proposal to delete a section which they wanted very badly, to get the support of Congressmen from peripheral areas who weren't going to vote for the bill anyway. But this maneuver which was purely a legislative maneuver to keep the bill alive so talk could be continued, did keep the wheat section of the bill alive and eventually the whole thing was put together and voted out.

But I mention this to point out that in the legislative process I have learned that it isn't the vote on final passage that really counts, either in committee or on the floor. In the Senate Committee 3 weeks ago when the whole bill was up for discussion, I think the first really key vote was on a so-called Powell amendment relating to the recreational and land use provisions of the bill, which would have required that no public funds be spent on development projects unless they were integrated. This crucial vote lost by 43 to 40. A second key vote was a seemingly harmless provision to permit any farmer to feed any grain he grows on his farm -- no matter how much. This was described as an amendment to permit any little fellow to feed a pig and a cow and a mule. This lost by about 45 to 40. As it turned out, the vote on final passage was a very perfunctory vote -- everybody knew how it was going to go.

Lazar Volin, Regional Analysis Division:

I think that in addition to the kind of problems you indicated where the work of research economists in this Department and other Departments helps in making policy decisions, particularly in relation to legislation, we ought also not overlook the work which is done in helping Congress to study various problems. There were also contributions to the studies of the Joint Economic Committee, including, for instance, comparison of the Soviet and the United States economies, and a number of others. You may want to say something about them.

Schnittker:

I think this is a very good point. It is another reason why research doesn't always get done, I guess. Reports to Congress have to be made and they really can be made only because some research has been done.

James P. Cavin, Economic and Statistical Analysis Division:

I've heard mention of several influences playing on policy. I haven't heard anything about an organization I used to appear before during the last Administration but have never even seen

in this Administration. That's the National Agricultural Advisory Commission. Are they playing any role?

Schnittker:

We have with us tonight the secretary of the National Agricultural Advisory Commission, Mr. Grover Chappell. Grover, would you like to respond?

Chappell:

We still have an Agricultural Advisory Commission, with 25 members. The Advisory Commission was one of the first groups of people to see the publication, "Food and Agriculture -- A Program for the 1960's." We started really working on that about the first of December and we treated it rather confidentially for some time. But late in December and prior to a meeting of the National Agricultural Advisory Commission in January, these programs and this publication, which had all been discussed previously with the Commission, were mailed out to the members. Since then virtually all of their work has been devoted to discussion, appraisal and recommendations of programs -- either these programs or similar programs related to the same problems. I think they have been quite active and very useful.

Schnittker:

I would add to that the matter of the special advisory committees which were appointed on the heels of the Ag Act of 1961. Congress recommended that the Secretary name some advisory committees to help write legislation to be brought up in January of 1962. The first advisory committee appointed was on feed grains and wheat. In the 5 days that committee met on three different occasions in the fall and winter, almost all of the time was spent on the very difficult question, shall we continue the voluntary feed grain program or shall we move into a mandatory referendum type program, and if the latter course is taken, what should be the nature of the program? I know the limitations of advisory committees. A great amount of labor can go into consulting with advisory commissions, but I can say from experience that as secretary of the wheat-feed grain advisory committee that they have been of some use to us.

Juers:

A further comment on the National Agricultural Advisory Commission. Prior to coming with the Department, under the previous Administration, I worked with a member of the old NAAC and it seems to me the function of this group has changed somewhat in the sense that they are now a kind of internal sounding board for positive programs, whereas it seemed to me the old NAAC was used pretty much when they were needed to be the group that recommended an unpopular change in policy. I don't think they have been used in this sense now. They are genuinely a sounding board for policy changes and quite frequently before these are announced, so that they don't come into the prominence in connection with these decisions that they might have previously.

Southern:

This question is directed to Bob Clodius. I would like to have him comment on this matter of priorities.

Clodius:

I can't be sure whether I'm talking with two hats or two heads, at this particular occasion. What I suspect is going on is that the Bureau of the Budget and someone in the President's Office has some kind of a notion of a wages fund support for agriculture and they look at the budget for agriculture and here is the whole ASCS business, and here is economic research, and they sort of feel that if you can some way or other cut down on the price and income support operation, this will free up some money over here for economic research. But back of it all is the idea that there is only so much of the total national budget that is going to go to agriculture -- this is the amount they get and they can work out their own salvation with respect to it. It is only in this kind of a context that you get involved in proportionality. On the eight topics that the review committee picked out -- they made no judgment about priority among these things, but rather, they were recommending these to the Administrator to consider in his infinite wisdom as to which ones should receive priority.

Schnittker:

My observation of research convinces me that one of our greatest problems is lack of terminating facilities. How many of you were in Ames in 1956 at the National Marketing Workshop and heard Ray Bressler talk about how you decide on whether a

project gets another year or whether you cut it off? I was an impressionable graduate student at the time. Upon going to Kansas a few months later, I immediately terminated two projects, which had been on the books for years but had had nobody working on them. They were assigned to me and I terminated them right then. This is a great problem -- to decide among priorities and to terminate projects with long histories and famous names.

Koffsky:

This has been a strange sort of day, hasn't it? I'm real glad I found something nice to say to you first thing this morning. But we do appreciate the candor with which the people invited in have spoken to us. As we start in the morning with a discussion of the division programs, I think we would do well to keep in mind what Clodius has said to us.

## THE IMPERATIVES AHEAD IN FARM ECONOMICS RESEARCH

Carl P. Heisig, Chairman

Heisig:

This morning we are going into that part of the program that involves a quick look at the programs of each of the five divisions. We thought we would have a brief discussion of each one so that those of you who are not familiar with the particular program would get a picture of the complete sweep of the research program in ERS. We have the Divisions of Farm Economics and Marketing Economics this morning, the Economic and Statistical Analysis Division this afternoon, and the two foreign research divisions tomorrow morning.

This morning we have the two largest divisions. Without knowing it, we apparently grouped these properly in view of the fact that Bob Clodius yesterday lumped them together and made his comments about both of them in the same terms.

The first is the Farm Economics Division and we will start off with the Director of the division, a Kansas product, who took his work at Kansas and Harvard. He has been in the Department and in economics research ever since the mid-1930's. I will now introduce H. L. Stewart.

Hugh L. Stewart, Farm Economics Division:

Mr. Koffsky said in his opening remarks yesterday that all of us are a part of the ERS establishment. But I couldn't help but feel subsequently that the field staff must have had some difficulty in recognizing their place in "the establishment." I had the feeling that if I were a field man I might have felt that I was the forgotten man of the organization. Burton French said we are going to get around to the ADP requirements of the field staff after we take care of those in Washington. And Bob Clodius told us that the committee that reviewed the ERS work a year ago concluded that in some respects all of our staff ought to be in Washington. As I understood him, he said that geographic orientation of agriculture was primarily a historical accident which had no economic significance -- that a geographic orientation of research resources therefore attempted to give economic significance to something which has no economic significance. Later he did qualify this when he said there are some phases of our agriculture which by their very nature have to have some geographic orientation.

Another possible impression yesterday in light of things we did not say was a lack of recognition of the contribution which our field

staff is making continuously to policy determinations. So I want to open my remarks by saying to the field staff that we do recognize your vital place in this organization. Yours is an essential part in these policy decisions that are being made every day.

We in Farm Economics are concerned with economic adjustments which are being made and which are needed in agriculture in various production situations in order to meet changing conditions. We are equally concerned with the development of pertinent economic intelligence needed in policy formulation, in the planning of programs, and in the institutional arrangements required to achieve those adjustments. As was said repeatedly yesterday, our agriculture is dynamic. Conditions are changing constantly. As a consequence, our economic research has to be changing constantly too. Agricultural adjustments needed vary not only through time but they vary spatially. They vary from one production situation to another. So our production research program also has to be dynamic, both spatially and temporally. Our research program has to be forward looking, we have to have our research results available when the decisions are made. And it has to be continuous. We need not be concerned about working ourselves out of a job in farm economics. As a matter of fact, I would like to reiterate what was said repeatedly yesterday and last night, namely that with the advent of the New Frontier and the Economic Research Service, opportunities for our work to be really effective in policy decisions and, in turn, our responsibilities, are at an unprecedented level.

#### Research Organization

Now let me touch on the organization of our division. We are organized into five branches and one Pioneering Research Group. Some 55 percent of our professional people are in the field. Most of them are located at land-grant colleges with whom they are cooperating. We need to stress this phase of our work as there are limitations in attempting to evaluate our economic research program without recognizing our sister institutions in the land-grant colleges and the complementary interests which we have.

One unique feature of our organization in the Farm Economics Division is the investigation group which replaces the section. An investigation group leader, rather than a section head, has responsibility for technical direction of the research program of his immediate group. But he is relieved from some of the onerous administrative tasks which the section head is saddled with. An outstanding advantage of this organization is the man-in-job concept with its advancement of professional personnel for technical competence and stature rather than for administrative chores and a place in the administrative hierarchy. This does enable us to give more recognition for technical competence. In contrast, however, some of the

less productive people sometimes cannot be given grades that Civil Service standards would otherwise permit.

Let me touch on the branches now. Our largest branch is the Agricultural Adjustments Branch which develops a research background for the development and appraisal of farm programs, as well as economic intelligence needed by farmers in determining desirable adjustments in their farming. Emphasis is given to a series of coordinated investigations of adjustments needed in representative farm resource situations; aggregations of these normative analyses into area, regional and industry totals; efforts to develop improved methodology and to move more rapidly into production response analyses, farm program requirements for achieving balanced production, economies of size, and the status of the family farm. This branch has the widest dispersion of personnel in the field. This is essential not only to ERS and to our Farm Economics Division, but to the Department of Agriculture which has to have these enlightened contacts with different production situations throughout the country. Repeatedly, requests from across the street, from the Congress, and from the public require a knowledge of these individual production situations. Whether or not such resources are located with a research agency, the Department has to have them. I personally think that the most effective location for them is with a research agency which can evaluate not only the current changes, ~~but~~ which also has the understanding, the know-how, and the ability to utilize related analyses made elsewhere in interpreting the adjustments needed in such areas. We are making such interpretations every day and we are going to have to keep on doing it. And we have to have contacts which will enable us to keep abreast of changes in these situations.

Another reason we need a dispersion of our personnel is our relationships with the land-grant colleges. One of their primary interests is the guidance of production decisions of the individual producer. We have a similar interest in addition to our interest in providing necessary economic intelligence for guiding policy decisions, program plans, and institutional arrangements. These interests complement each other. By augmenting their resources, and they ours, we maximize the efficiency of our resources.

Our Costs, Income, and Efficiency Branch specializes in economic and statistical analyses of changes in technology and in aggregate productivity. Their work includes four major areas. One deals with prospects for supplying farm production needs, including trends in farm output, inputs, and productivity -- work that is geared closely to the work Rex Daly was talking about yesterday and to the 5-year projections planned as a continuing ERS activity. They are concerned also with changes in technology, numbers and kinds of machines, their productivity, farm structures, fertilizer, feed and livestock relationships. Another area of interest is farm labor needs, farm labor

productivity and capital-labor substitutions. Through some 40 Costs and Returns Series they measure annual trends in investment and resources, expenses and incomes, for different types of farms in different parts of the country. They have hung up a new shingle "under new management." And under Glen Barton they are showing signs of really providing some effective analytical work.

The Land and Water Branch is concerned with economic research relative to the use, productivity, ownership and control of land and water resources; with policies and programs for the development and use of land and water resources; and with a special area of work in which they are assisting in planning specific resource development programs and projects. I was a little surprised when Bob Clodius told us yesterday that a year ago they had gotten the impression that land and water research really didn't belong with the rest of our farm economics research. I have been impressed with the cooperation, the coordination, and the similarity of the work in Land and Water and our other branches. In analyzing land and water resource requirements, they certainly are concerned with the same kind of predictive models that we are concerned with in other areas of economic research. They are concerned with the same efficiency practices in the use of land and water as is our Agricultural Adjustments Branch. They are concerned with the same conservation practices and the same conservation systems of farming. They are concerned with the same factors relative to the acquisition, transfer, and control of land and water resources as are the other branches. They are concerned with the same multiple use concepts as we are in connection with ranch operation and organization in the Western States. They are concerned with institutional arrangements, sure, but so are some of the other branches -- the Agricultural Finance Branch, for example. Perhaps we are looking at it from a different angle but I have been impressed with the need for creating even closer working relationships rather than organizational obstacles.

Our Rural Development Branch is concerned with economic research on the characteristics and the adjustment opportunities in chronic depressed rural areas, and with the problems of rural economic development in such areas. They are concerned with the location and characteristics of these areas -- human, physical and economic. They are concerned with analyses of factors bearing on chronic low incomes and their amelioration, with alternative solutions to these problems, and with assistance to local development groups in the interpretation and use of research results. In addition they are charged with the responsibility for coordinating rural development research throughout ERS.

The fifth branch is our Agricultural Finance Branch which is concerned with a broad economic research program in agricultural capital, credit, risk, taxation and local government. Their work can be broken down into four major parts. They include: (1) changing capital and credit needs of farmers, improved financial practices, and assistance

to lending institutions in improving their services to farmers; (2) improvements in and the economic effects of alternative forms of taxation and local government organizations; (3) the incidence of losses, insurance needs and practices, and the alleviation of production risks of farmers; and (4) farm real estate values, methods of transfer, and methods of financing the transfer of farm real estate.

Our Pioneering Research Group is concerned with interfirrm coordination, with ways in which successive vertical stages of production are coordinated in regard to production decisions, the control of resources, the provision of services, and the assumption of risks. They are especially concerned with interrelations between farm and nonfarm businesses -- whether they be through integration, contracts, cooperation, or through the open market.

Much of our research is of interbranch and interdivision interest. Some of it relates to current needs; a good deal of it to longer-time needs. It involves not only adjustments which farmers need to make; it involves patterns of marketing resources required, of transportation and community services, and the location of people. It requires better demand estimates, both for single commodities and for groups of commodities; better appraisals of changes in technology, and in production rates. We in the Economic Research Service may need to give increased attention to an adequate framework for the longer-term estimates. Rex Daly and his shop have always been concerned with these; they still are, as he indicated yesterday. But I can see some danger of such work being neglected as a result of emphasis and the additional resources required in our 5-year projections.

#### Research Needs

High on a list of the work which we are attempting to facilitate and improve is our series of coordinated adjustment studies. In this series of normative adjustments we are attempting to aggregate on an area, regional and industry basis, the adjustments which would maximize farmers' incomes. A comment was made last night -- it seemed with some surprise -- on the difficulty of applying allotments across the board to the dairy industry because some farmers increase their production while other farmers are decreasing production. This is not surprising. Our work in this area could be very helpful in appraising the effects of programs such as dairy allotments by delineating and appraising significantly different production situations. This area of work is needed for guiding the individual producer, understanding cause-effect relationship relative to size of operation, and in understanding the place of the individual enterprise in the farm organization. Most farms produce more than one commodity. In order to determine policy decisions needed to effect adjustments desired, we have to understand the interrelationships between enterprises. Normative appraisals also are an important step toward an understanding of production response. And we must find ways to expedite these analyses if we are

to have the research basis for formulating policy decisions when the decisions have to be made rather than two or three years later.

Production response is another of our most important areas that we must get on with. Here we have a special need for the improved techniques. The work that Day and Schaller have been doing in combining conventional time series with programing techniques is very promising. I am sure that much of the work that Tony Rojko and his group are doing is also promising. We have some promising work with producer panels too which Bert Sundquist will discuss. But it seems to me this is such an important area that we must put more blue chips on it. A much more cooperative spirit and interest in active cooperation between divisions is evident in this area and we would do well to facilitate it.

Some corollary areas which will facilitate our understanding of production response include our work on motivations, on basic values, on risk and uncertainties, and on managerial limitations. We need a better understanding of each of these, and we need to get them integrated into our models.

Another area we need more emphasis on is economies of farm size. We need to expand our analysis to include a wider range of size and additional types of farms. We should give more attention to the need for economic growth in these individual units. Here we are concerned with the problem of capitalizing income into land values and the problems inherent in the credit and the tenure arrangements required to assure the transfer of these going farms from one generation to another. We need also to intensify both our campaign to clarify the fuzzy thinking relative to the family farm and our analyses of the competitive position of the family farm.

Another imperative in our research is to awaken to the reality and the magnitude of off-farm income. Mr. Koffsky touched on this yesterday when he referred to the changing character of agriculture. Information which Bob Masucci is assembling in this area will prove to be a major contribution. It is forcing us to recognize nonfarm income as a strong economic force in production decisions, in resource requirements, in credit requirements, and in opportunities for people in agriculture. We need to augment considerably the data which are available and our Costs and Returns series may be one place we can do it. Some preliminary work would indicate that some of the Social Security data may be another source of information on off-farm income.

Within our division more emphasis is needed on analytical phases of our Costs and Returns series. We are beginning to move in that direction. Other imperatives include an improved understanding of the impact of weather on crop yields and other factors affecting changes in productivity. More meaningful analyses here would facilitate our understanding of the contribution which agriculture is making to

economic growth. We need to be more concerned, too, about the potentials for recreation. Both in commercial farming areas and in low-income areas what opportunities might there be to utilize recreation as a user of farm resources and as a provider of employment and income for farm people?

Still another imperative in the Farm Economics Division which may apply to the Economic Research Service generally is more pointed and more timely reporting of our research results. We have new users and new needs. We must recognize that our research can have meaning only as we foresee the needs and provide pertinent and timely research results to those who make the decisions. We've been criticized, and I think rightly so, for failing to do an adequate job of educating the public relative to farm policy decisions and needs. We've been so imbued with the idea that we can't put anything out unless it has an unquestionable research basis that frequently the parade goes by before our findings are available. Somewhere in between this precise research reporting and all the quickies we do with whatever research basis we have, we might well consider some kind of release which would do a more effective job of educating the public. There is a limit as to how far we can go, but we do have an opportunity to better educate the public, including some of the farm organization leaders and some of the politicians in regard to farm policy requirements.

#### Field Reports

Now I want to introduce a couple of our field people who are going to describe in a little more detail some of our field research. First, Clyde Stewart is going to take 10 minutes to tell us about some of our field research in land and water economics. Clyde is on our field staff at Utah. He is a Utah product. He did his undergraduate work at Logan, Utah, and his graduate work at Iowa State University. He is one of the oldtimers in the organization and is well qualified to discuss our research program in this area, particularly from the standpoint of the field. Clyde Stewart.

#### Clyde E. Stewart, Farm Economics Division (Utah):

"Land and water research involves studies of the economic use and development of land and water resources, land income and values, resource institutions, and land tenure problems. Such studies include periodic inventories of land and water resource uses, research on the economics of land and water resource management, analysis of competing uses and changes in patterns of use over time, appraisals of resource development potentials in relation to economic growth and projected requirements. Also included are analyses of the adequacy and effectiveness of laws, administrative measures, and organizational arrangements for directing the use and management of land and water resources; and

analyses of the effects on resource use of methods for acquiring and transferring ownership, contractual operating arrangements, and the division and distribution of property rights in land and water resources." 1/

Rather than to attempt a complete inventory of research needs on land and water problems I will limit myself to several general problem and research areas in land and water economics. I will use Western research for illustrative purposes.

#### Allocation of Natural Resources among Competitive Uses

Many land and water problems in the West may portend critical problems in other sections of the country. A rate of population growth in the last several decades substantially greater than for the Nation, in combination with an arid climate, has accelerated land and water problems in the West.

Demand and competition for land and water resources has increased among major uses and users. Rapid urbanization, industrialization, and enlarged recreational pursuits have intensified this competition. Conflicts between agricultural and other uses of resources are at the heart of the main problems. Problems of mobility of resources between uses and users and the associated obstacles to adjustments become highly important areas for research in land and water economics.

Studies of land and water markets give valuable insights into adjustment and pricing problems. In the case of water, however, severe limitations occur because of an absence of market transfers in many areas and of difficulties in identifying what is being priced and transferred in other cases. The market system does not function adequately in the allocation of land and water resources among alternative uses.

The Farm Economics Division has done some notable work in the field of water law. We need also to do a substantial amount of research in the economic implications and effects of particular laws and other institutions, including their influences facilitating or hindering adjustments in the use of land and water.

#### Quality of Resources

Quality of resources, especially water, is one of the most under-invested research areas in the field of natural resources. This possibility is suggested by estimates that an investment of up to \$100 billion may be needed and made by the year 2000 to maintain and assure

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1/ USDA Land and Water Policy Committee. Preliminary report: A Land and Water Resource Policy for the United States Department of Agriculture. Washington, D.C., Jan. 1962, p. 222. (Processed.)

adequate water quality in the United States. By contrast, the estimated needs for completing prospective Federal reclamation projects and the aggregate of Federal appropriations for water resource development in the past are reported at only a fraction of this amount.

As a basis for subsequent quality planning, ERS in cooperation with the Associated Rocky Mountain Universities is conducting a comprehensive economic base study of the Colorado River Basin. Conceptually, this study is an analysis of regional change within a context of national growth, regional constraints, and regional advantages. This study will attempt to develop, by sub-basins and for the Basin, inter-industry input-output models that will show the economic growth that could result from several combinations of water uses, and that will estimate the needs for water by major industries.

#### Federally Owned Natural Resources

More than a third of the land area of the United States is federally owned. Long an important source of forage and timber with opportunities for improvement, it is becoming increasingly important for its residential, recreational, and mineral resources.

Already recreational demand, in combination with demands for other uses, is placing a severe pressure on federally owned resources. A recent moratorium on entry for surface rights, current review of public land laws and policies, and single versus multiple use conflicts suggest the intensity of problems on these lands. Important and complex public land problems persist in terms of allocations among major uses and the form of tenure under which these public resources should be used.

A recent study of irrigation development and administrative problems under the Desert Land Act and a current study of grazing fees and income effects of alternative fees and lease rates are studies requested by the public land managing agencies to guide their policy decisions.

#### Evaluation

A need for improved methodology and data for evaluation and pricing of land and water resources usually arises in analyses of land and water problems. Increased competition and demand for land and water for nonagricultural purposes, and quantification of nonmonetary and nonmarket values, create difficult problems in valuation and pricing. The incidence of costs and benefits is a key economic problem in evaluation.

Land and water market studies, irrigation adjustment studies, appraisals of irrigation projects, and small watershed and river basin

investigations by the division are contributing to development of procedures and standards of evaluation. But additional research is needed to meet new and more complex evaluations that are associated with emerging patterns of use of land and water resources.

Analysis of the economics of irrigation, with particular emphasis on evaluations of increments of water and appraisals of profitable uses and adjustments to additional water, are important both at the aggregate and firm levels. Similar research should be expanded in the economics of drainage, land development, and land treatment measures, especially with reference to the small watershed and flood prevention programs.

#### Inadequate Data

Economists are always confronted with a problem of adequate data. With the increased use of mathematics and machines, this problem has become more acute. Development of methodology is highly desirable but for some economic problems, methodology and machines are more advanced than data. In such instances the unsuspecting user frequently is lulled by the mathematical accuracy of the formulae into a false confidence in the research results. A substantial need is apparent for a more concentrated and integrated program of data collection and dissemination to meet analytical needs.

#### Comprehensive Analysis

State research agencies usually are restricted in the study of regional resource problems. Regional research partially offsets this restriction but in most instances, contributing projects deal with small geographic areas within States.

An opportunity may exist for ERS to complement State resources more effectively by participating in this regional resource field on a greater scale. But field activities of a basinwide or regional nature should be closely integrated with similar activities at the national level. This research also suggests interregional studies as a basis for allocating national production by regions and for projecting economic growth within a particular region.

Comprehensive analysis of land and water resources encompasses nonagricultural uses of land and water. Satisfying the increased demands for land and water for nonagricultural uses will frequently mean shifting resources out of agriculture or more intensive use of resources now used at least partly by agriculture. Agriculture is interested in and affected by such transfers and adjustments among major uses. In the Colorado River Basin, these questions are being approached through a cooperative effort with several universities.

### Conclusion

Implications of recent projections by the USDA Land and Water Policy Committee are substantial in terms of land and water use, development, and research for the future. Less emphasis may be placed on agricultural production. More emphasis may be placed on the value of water in stabilizing incomes and employment in our agricultural economies. Certainly increased emphasis will be placed on the use of water and land for nonagricultural purposes. And finally, it is apparent that water and land transfers among uses and users and the associated economic, legal, and institutional problems will become increasingly important in the immediate years ahead.

#### H. I. Stewart:

Bert Sundquist is going to tell us now about some of the work they are doing in the dairy States. Bert is one of our investigation leaders. He is stationed at St. Paul. Bert is from North Dakota where he did his undergraduate work. He did some graduate work and was on the staff at Kentucky, and finished his graduate work at Michigan State. He is going to talk to us now about the work in the dairy adjustment area. Bert Sundquist.

#### Wesley B. Sundquist, Farm Economics Division (Minnesota):

Fred Waugh made a statement yesterday to the effect that there is a lot of research going on in the supply response area and there is probably no one research technique that is going to answer all the questions. I agree. We are working with two different, though related, techniques in our dairy adjustment studies. Each has its purpose and its aggregate implications. I attach a lot of importance to the latter as we in ERS have an opportunity and a responsibility in this area that researchers working locally do not have.

One of our efforts is the typical normative type analysis which Stewart has talked about a bit where we have looked at normative adjustments or profit-maximizing adjustments on a number of strata of farm firms through budgeting or programming techniques. We've aggregated these normative supply schedules. We haven't published much along this line yet, but we do have quite a bit of work on aggregate supply analysis under way and nearing completion. Then having the normative analysis finished, we put that in a supply-demand equilibrium analysis to find out what this means in terms of policy implications and, more locally, in terms of adjustments to individual firms.

Now the criticism of this is a relative one. The analysis has a good deal of value. It gives us some benchmarks to see what the

effects of most profitable organization of farms might be on total supply and price. Two problems, of course. It doesn't answer questions of prediction, because farmers typically are not completely profit maximizers. And it's apt to lack somewhat in dynamic structure. We can't deal with the kind of variables that bring in farmers' expectations, the kinds of obstacles to adjustments as farmers see them.

Another typical route we describe as time series analysis, where we actually observe what farmers have done in the way of production. The production aggregates that we observe are based on decisions of individual farmers in the face of imperfect knowledge, risk discounting, resource rationing, somebody's wife making the decision that she needs a refrigerator worse than he needs an addition to the milking parlor, or what have you. We observe this kind of data through a variety of sources. Harry Trelogan's SRS and the Census are major sources of that kind of information to us. We use this kind of information in time series analysis to look at production elasticities, project number of farm firms, total output, this sort of thing.

One of the problems here is that structure is changing very fast, and we lack something in dynamic structure. We don't have adjustment norms at the firm level in this kind of analysis -- we can't tell a farmer what he ought to be doing in order to maximize profits.

The second research project I want to discuss is what we call our producer panel. In this producer panel in Minnesota, about 300 dairy farmers are interviewed on an annual basis. These farmers were selected randomly from an area random sample. We have stratified these groups of farmers by major decision and what we hope will turn out to be structure variables -- things we think important to farmers' decisions as to whether they are moving up and expanding the supply of dairy products, or tapering off, or moving out of dairying. Whether or not a farmer has a son coming into the farm business is an important thing; or whether he is 55 years of age or older, for example, are things that affect his desire to expand the size of his dairy operation. Also, the kind of production plant he has to work with, and the kind of price and production expectations he holds.

I've mentioned short- and long-run expectations. The kinds of measures we have obtained are for periods of 1 year and periods up to 5 years. This is stretching long-run a bit; it's more a short-run and intermediate-run time period. Farmers' attitudes toward adopting new technology, the kind of capital base they have to start with as represented by net worth, their willingness to borrow additional funds, what they are going to do with the farm when they get rid of it, when they are going to get rid of it -- these are things that affect the kind of adjustments that individual farmers make.

We have 2 years of data and we are currently starting our evaluation of the measures we have been getting on structure and quality of

data. We hope eventually to use these data in a normative analysis, or what some people would call a conditional normative analysis -- i.e., looking at changes in an economic context but recognizing that there are some deterrents to making the kinds of changes that we as economists would say that farmers should make. Then from our initial sample we are going to be able to blow this up on an area basis and aggregate the results of our conditional normative analysis. We hope in this way to have something with a little more application than a straight normative analysis might have.

I am enthusiastic about this project although, as yet, we haven't had a chance to fully evaluate it. The problems, of course, are in terms of doing enough of this work, on enough products, in enough areas, so that one has good information on an aggregate basis. One of the things that could really give this type of research some real aggregate potential, it seems to me, is if we could run a rather intensive analysis on area samples of producers and then be able to tie this area into some regular reporting service where we could make some assumptions about the other areas and blow it up via some regularly reported data. If we could get together with the people in SRS this would certainly enhance the potential of this kind of research.

### Discussion

#### Heisig:

We can take 8 or 10 minutes for questions and comments. Hold up your hand and state your name so we will get it on the record.

#### M. R. Janssen, Farm Economics Division (Indiana):

I want to emphasize that we do have much more than our field men in the States as a complement to the ERS organization as a whole. For example, when the request came a year ago for an appraisal of sugar-beet potential, I knew nothing about sugar. But there were enough people in the station that we could call upon who could provide a very good appraisal.

My second point is that not all policy decisions are made in Washington. Not too long ago a group in southern Indiana was very interested in trying to get a sugar allotment in Indiana. We were called in because of our study and it was concluded that it would not be particularly profitable or desirable to have sugar in the lower Wabash Valley and consequently it was dropped.

Another thing -- many of our information materials are not permanent library materials. Our series change from time to time

and consequently people from the stations aren't always able to find them. Fairly comprehensive files in the field offices of ERS publications are helpful.

A final point -- ERS recruitment efforts could be facilitated if Washington personnel would let the field personnel lay the ground work for them before visiting State Colleges.

H. I. Stewart:

Your comments point to the importance of contacts at the grass-roots. We are going to have a discussion on relationships in the closing session this morning, so let's defer further discussion until that time.

Russell McGregor, Bureau of the Budget:

What's the present distribution of resources among branches? Is it optimum? And if not, how should it change in the next 5 years?

H. I. Stewart:

As I tried to indicate, we are living in a dynamic world. Hence we probably don't know what allocations should be in the next 5 years. And because of these rapid changes in the economy we attempt to analyze, and certain inevitable rigidities in any research program, we probably do not have an optimum allocation of resources among branches within our division at the moment. But we are looking at this constantly in our attempt to get a better redirection of our resources. As you imply, we must recognize that we are not going to receive additional resources to cover all the additional things that are needed. We must do a better job of allocating our resources -- of reorienting and pointing up and expediting our research with the resources we have.

William S. Hoofnagle, Marketing Economics Division:

We in the Marketing Economics Division are interested in how you keep people in the panel and whether you give them any incentive to stay in and report over time. We have provided no incentive other than bringing along a report or two and talking to the farmers on these surveys. We are losing some participants because they have quit farming or retired. And this does give rise to the necessity of keeping the size of sample up and bringing in new participants.

Randy Barker, Farm Economics Division (New York):

I might make some reference to a study in New York which is using pretty much the same procedure. One way they have of keeping up with their sample is by following not the farm but a geographic segment. They have roughly 1,500 farms in their segments in the N.Y. milkshed. They have found that by following a segment they also develop a record of those entering and those dropping out.

Koffsky:

This is our biggest division. Regardless of what the boys have said about the pressures on them for information, for making policy decisions, for service work, actually the load here is less than in some other divisions. This is where most of our research is going to come up. We have a real problem here, a real challenge to make it good, to make it meet the demands that are ahead.

## THE EMPHASIS AHEAD IN MARKETING RESEARCH X

Kenneth E. Ogren, Marketing Economics Division:

Title II of Public Law 733 entitled "The Agricultural Marketing Act of 1946" put a heavy emphasis on reducing costs and narrowing the price spread between the producer and the consumer. The first research made possible by this Act also put a strong emphasis on lowering marketing costs.

However, the RMA Act did go beyond cost-and-efficiency goals in stating as an objective "that new and wider markets for American agricultural products may be developed both in the United States and in other countries with a view to making it possible for the full production of American farms to be disposed of usefully, economically, profitably, and in an orderly manner."

We have had tremendous gains in the efficiency of American farms. More gains are on the horizon, yet no one would say that prospective gains in production efficiency will solve the demand-supply imbalance in agriculture. Similarly, we have had impressive gains in the physical efficiency of moving farm products from the farm to the consumer, especially in recent years. Many inefficiencies still exist. Substantial gains in efficiency can be realized in the coming years. But again no one will contend that gains in physical efficiency of marketing farm products alone will do the job.

What, then, should be the emphasis ahead in marketing research? Research to find less costly means of marketing farm products must always be an important part of the total research effort in the economics of marketing. This is the research that already has done so much to increase marketing efficiency -- that, together with the increased efficiency of farm production, has made possible the great progress in living standards that we all enjoy today.

Nevertheless, I am not convinced that our research in this area should be solely "more of the same." We need to recognize that businessmen are not the "maximizers" of traditional theory, but managers in today's complex economic world. Efficiency research needs to be designed to present to businessmen not necessarily the most efficient process, but standards of efficiency that are at least (1) improvements on present practices, and (2) attainable goals for most managers within the limits of present technology and various external institutional factors such as availability of credit, labor supply, tax factors, and Government regulations.

As economists, we are and should be increasingly concerned with improving efficiency in a much larger sense than the physical operations

in marketing farm products or the efficiency of a single firm. The critical role of the marketing system is in pricing at the various levels to guide the allocation of resources so that there is the "maximum efficiency" in the responsiveness of farm production and marketing decisions to market demands. How to achieve this improved pricing and selling efficiency represents the emphasis ahead in our marketing economics research programs. I can best illustrate this emphasis by referring briefly to the activities of each of our five branches.

Market Potentials Branch--Market potentials research supplies the economic research and services in an overall Department research program on new products, new crops, and new uses to maintain and expand markets for farm products and their derivatives. We have economists at each of four Department Utilization Laboratories to develop a program of cooperative economic utilization research and to provide liaison between ERS and ARS. These economists are the working representatives of all of ERS, not just the Market Potentials Branch or the Marketing Economics Division.

What can this market potentials research do? It provided the analysis through market tests that showed that white potato flakes are feasible for commercial production and sale. Expanded markets for processed potato products of many types apparently stopped the 50-year decline in per capita consumption of potatoes. An expanded market for processed products can mean, but not automatically, a more orderly marketing situation.

Market Development Branch--Public research in this area is relatively new in its application to farm products. Farm commodity groups spend close to \$100 million annually in the promotion and merchandising of agricultural products. In total, about \$2 billion are spent on promotion and market development activities for farm products. Does this add to or subtract from the total income to farmers? About 1,100 to 1,200 different farm commodity groups spend the \$100 million. Some have strong, well-organized programs that no doubt have a positive effect on the demand for their commodities. Many others probably largely waste their moneys because of inadequate funds, poorly conceived programs, and ineffective leadership. How can these commodity groups use their money most effectively, or should they spend any money on promotion or advertising? Whatever the answers to these questions are, increasing attention will be focused on these efforts and the needs for economists to provide answers.

Market Development research also is concerned with the evaluation of public programs in the distribution of food. Increased emphasis on this area was provided in the first Executive Order of President Kennedy authorizing an expanded Food Distribution Program. Beginning early in 1961, division personnel have been heavily involved in an

evaluation of the Pilot Food Stamp Program. This research is continuing with the expansion of the Food Stamp Program. Research also is under way with School Lunch and Direct Food Distribution Programs.

Many agricultural economists have been and perhaps still are skeptical of the usefulness or desirability of any efforts on the part of agriculture to expand their markets through merchandising, promotion, and development of new products. Whether skeptical or not, the research needs surely will be there because of the growing interest on the part of agriculture to take part in these programs and the collection of funds for promotion and development under publicly authorized programs.

To me it makes little sense that agriculture should sit back and look at the market for their products as a given parameter--a sterile object that is not to be tampered with. It obviously is not true in the case of foreign markets for agricultural products. Neither can it be true for domestic industrial uses for farm products, where markets are continually threatened by nonfarm products. And I seriously question that it is true for domestic food uses of farm products.

There is no doubt that Engel's law with respect to a decreasing proportion of income going to food is valid over time. Consumers now spend about 20 percent of their income for food compared with a postwar peak of 27 percent in 1947, which was up from a 1935-39 average of 23 percent.

However, if consumers bought the same food and services they did in 1935-39, they would spend only 14 percent of their income instead of 20 percent on food. This difference of 6 percentage points represents about \$20 billion. Surely most of this was for the increasing services and costs of services, but even if agriculture got only 10 percent of this increase, \$2 billion seems rather worthwhile. When the shift to higher priced and higher farm-resource using foods such as meat products is considered, 10 percent could well be a much too conservative estimate.

The objective of promotion and new product development obviously cannot be an increase in per capita consumption of calories but a higher cost and more satisfying, higher quality diet. In striving for more "efficiency" in this direction, we can help agriculture. This will not necessarily be helpful to all farm products, but this is a problem not only of looking at aggregate effects but at individual commodities. Who is to tell the Florida citrus growers, for example, to stop advertising frozen concentrate because it may take some fresh sales away from California or from consumption of other farm products. What I am emphasizing is that in a world of imperfect knowledge, product differentiation and interdependence of producers and marketing firms, such common business activities as product development and promotion are appropriate and vital areas for economic analysis.

One final comment on market potentials research. An acceleration in economic growth for the nation is a major goal for the 1960's. Innovation is the heart of economic growth. Through market potentials research, commercial adoption of new products and new uses are stimulated which lead to development of new markets and new uses, sparking new demands, and revitalizing the economic position of agricultural industries. Successful innovations often trigger new ones. And, incidentally, they often lead to new technology that lowers total marketing costs for a processed product compared to a less processed one. Frozen orange concentrate is an illustrious example.

Market Structure and Costs Branch--Market structures research is concerned with the marketing practices and pricing relationships of the marketing firms, the changes in the markets in which farmers buy and sell, the number, size and kind of marketing firms, degree of concentration, tax programs, capital availability and use, and technological developments. These factors are studied and will be studied further to determine how they influence prices and farm incomes as well as marketing costs and efficiency, and how any undesirable effects on the market power of farmers can be offset either through efforts of farm groups or Government.

The increasing role of Government in agricultural adjustment presents another need for sound evaluation of changes in marketing and of available alternatives. This is true not only for Government supply-adjustment programs but marketing information, grading, and inspection programs that can help give producers and smaller marketing firms improved information and a more equal bargaining position with large marketing firms.

Transportation economic research is a new and vital research area in this branch. Changes in transportation rates, rate structure, the future role of regulation in the changing competitive situation in transportation -- these elements are all of growing importance in research studies, especially the location of production and marketing of agricultural products.

Increased emphasis will be given to long-range outlook and projections research as a part of the accelerated ERS program. The division's continuing program in the measurement and interpretation of marketing costs and margins is centered in this branch. This is perhaps the oldest activity of the division and its predecessor units, dating back to the work of Fred Waugh and Dick Been in the early 1930's. But it is an area that is not likely to diminish in importance or attention as the proportion of marketing costs in the total consumer bill grows.

Animal Products and Crops Branches--Although the marketing problems for farm products have many similarities, nearly every

commodity is unique in one or more ways. These commodity research groups provide the focal points for keeping current with changes in marketing that may affect not only these commodities but others as well. Here we have centered our division's closest working contacts with the changing problems in the marketing of specific farm products -- through our own division field staff, industry research advisory committees, various industry associations, and the commodity regional marketing committees. These commodity research groups and their working contacts I believe also can be exploited to good advantage by all ERS divisions.

Major research areas for these branches include costs and efficiency, structure and practices, pricing, and economics of product quality. But the emphasis on research areas varies by commodity and will vary in coming years as problems emerge. Let me illustrate by mentioning a few of them.

The most urgent problems in dairy marketing concern prices and consumption. A study of milk price wars is intended to help improve the behavior of private firms and the application of powers by the Department and other State and Federal agencies. Studies of inter-regional competition in milk production and marketing are needed to guide decisions on investment in production and marketing facilities and to guide governmental agencies responsible for intermarket price relationships.

In the livestock economy, major issues center on product quality and the structure of the marketing system, such as direct marketing vs. terminal marketing, and the respective roles of large packers, independent packers, and chainstores. Our study of the economic effects of the Federal Grading Program for lamb is being completed. Research on the proposed dual grading for beef is a new project.

In poultry marketing, proposals for marketing orders for stabilizing prices have added new urgency to the need for economic analysis of many aspects of the structure and operation of egg and poultry marketing systems.

Product quality is a crucial factor in cotton's competitive struggle with the synthetics. A major part of fibers research is centered on aspects of this problem. Similar studies are needed for wool.

The decline in potato consumption has been halted. The decline in consumption of wheat and wheat products has not. Prices and margins for bread have increased steadily and sharply since World War II with little or no evidence of any improved efficiency in the distribution of bakery products.

In fruits and vegetables, marketing orders also are receiving increased attention. So, also, is research on interregional

competition. The growing importance of processed products has and will continue to intensify the competition among different regions for fruit and vegetable markets.

In other crops such as sugar, tobacco, and peanuts, Government programs have and will, no doubt, continue to gestate problems needing research. For example, some research this year on peanut marketing patterns and shellers' margins provided for agreement on price support differentials among three geographic areas with sharp, divergent views and interests.

My final comment is this. Marketing economics research, as is true of any economic research, to be effective must anticipate problems that need research in time so that our research results are not a documenting and reporting of historical facts but provide answers to problems that are useful to agricultural, industry, and governmental groups. This is not an easy challenge in these days of rapidly changing technology and other developments. Perhaps we can take some refuge in the following statement: "The world is changing so fast nowadays; you couldn't be wrong all of the time even if you tried."

#### Evaluating the Use of Freezing by the Baking Industry

Robert V. Enochian, Marketing Economics Division (California):

Rapid staling rates, plus consumer demand for freshness, have resulted in the traditional daily production and distribution of bakery products. This distribution method is becoming increasingly costly. By the use of freezing, which retards staling rates, this distribution pattern can be changed and perhaps marketing costs can be reduced. Freezing can be used to provide consumers with bakery products in various stages of preparation or new product forms, and it presents possibilities for unique production and distribution practices. Such changes may result in reduced marketing costs and also in changes in the structure of the baking industry.

The Western Utilization Research and Development Division, ARS, has worked out the optimum conditions for freezing, storing, and defrosting bakery products. The specific objectives of our study are to evaluate the economic aspects of freezing and to assess the importance of various other developments that potentially could influence decisions regarding the freezing of bakery products.

By following some of the flow lines bakers can use freezing in a number of ways. One of these would be to shift the baking operation to the consumer. This, as well as other uses, would eliminate losses from staling. It also would enable the housewife or restaurant operator to have freshly baked items more conveniently, and possibly

at less cost, than preparing them from individual ingredients. The latter, of course, would have to be evaluated for different situations. This use of freezing would permit any firm that is set up to freeze to get into the business of marketing partially prepared bakery products. A large-scale shift to this use undoubtedly would have an impact on the present structure of the baking industry.

Another use of freezing would permit the baker to produce daily fixed quantities to a fluctuating frozen inventory rather than adjusting daily production to a fluctuating daily demand.

A third use would be to delay production at any stage in the process. This would permit greater flexibility in scheduling production in larger batches. It also would allow makeup of products in a centralized location, with possible economies of large-scale operation, and then distribution to branch bakeries in supermarkets or shopping centers where the products would be baked.

Still another use would be to manufacture bakery products in a central plant and to ship them frozen to distant markets for distribution.

The ultimate use of freezing would be to handle ready-to-eat bakery products as frozen foods. This would eliminate the physical necessity of daily deliveries to grocery stores.

Cost reduction possibilities implicit in all of these arrangements would have to be evaluated for different situations.

We have two studies underway that are the first steps in evaluating some of these applications. One of these is a survey of about 400 bakers in 28 U.S. cities. An approximately equal number of freezers and nonfreezers were selected. The data from this study will be used to characterize the uses of freezing by bakers. Information will be presented on percentages and types of bakeries using freezing, how and why it is being used, quantities of product being frozen, bakers' evaluations of the impact of freezing on costs, and the expected future uses of freezing in relation to other trends in the industry such as baking in supermarkets and producing for private label by wholesale bakers.

The other study is concerned with the costs of distributing bread to grocery stores under different systems. Two systems that will be studied in detail are generally referred to as the driver-salesman and drop-delivery systems. The former is used by wholesale bakers and includes delivery and building of displays in the store by the truck driver. The latter is used by grocery chains for distributing to their own stores from a central warehouse with displays built by the store clerks.

The synthetic or economic-engineering method of cost analysis will be used to estimate costs of all inputs from the time bread leaves the wrapping machine until it is displayed in the grocery store.

A preliminary analysis of frozen distribution indicates a small potential savings over the driver-salesman system primarily by permitting a reduction in the number of deliveries. Preliminary estimates of costs using the drop-delivery system indicate that, with present methods, it is less costly than the driver-salesman system.

Before the probable impact of freezing can be evaluated with any finality several other aspects of the question must be studied. These include detailed analyses of the effect of freezing on in-plant costs under different conditions, studies of consumer practices regarding freezing of bakery products, and studies of market acceptance of frozen bakery products. The results of all of these studies should then be analyzed to evaluate the probable interactions of freezing with baking industry structure.

X Regional Research X

Robert L. Rizek, Marketing Economics Division (Iowa):

The research project I would like to discuss today is a North Central regional study, "Adjustments in Livestock Marketing in the North Central States to Changing Patterns of Production and Consumption," or NCM-25.

The economic forces that determine the location and level of operation of the facilities of livestock marketing often place heavy stresses on the industry. The locus of the meat processing industry has shifted from the large cities of the Northeast to Chicago and from there to the Western Corn Belt in a period of less than 100 years. The industry became increasingly concentrated in very large firms and large plants, but recently smaller firms have taken more and more of the market from the "big 4." At the beginning of this century, the trend was toward mammoth plants slaughtering and processing several species. Currently, plants (and firms) appear to be moving toward specialization. Changes also have appeared in the manner and location of livestock feeding.

The cost of these changes in terms of facilities abandoned or diverted to lesser uses has been great. Information about these changes, their causes, and their future progress would help the industry plan its operation so the costs of change could be greatly reduced.

The general objectives of this project are, first, to develop analytical procedures for measuring and understanding the effects of changes in geographical patterns of livestock production and meat consumption and changes in transportation costs, on the livestock and meat marketing systems; and second, to use the analytical procedures in estimating the effects of expected changes in the pattern of production, consumption, and transportation costs on the location of livestock marketing and meatpacking facilities and on the patterns of livestock and meat shipments within each of the major livestock regions and between each of these regions.

To achieve these objectives, six contributing work areas were designated:

1. Projected changes in regional production and marketings of slaughter and feeder livestock.
2. Projected changes in population and consumption.
3. Projected changes in interregional patterns of livestock and meat shipments.
4. Rail and truck transportation costs for interregional shipments of livestock and meat.
5. Establishing interrelationships between existing and projected regional patterns of livestock production and processing, transportation costs, and meat consumption.
6. Potential adjustments in the livestock and meat industry in the North Central States to changing regional patterns of production and consumption.

To put into operation and achieve the objectives stated, the NCM-25 committee attempted to fully utilize the talents of the individuals on the committee and the facilities available at the different universities within the North Central Region. This was accomplished by each State assuming partial responsibility for one or more of the six work areas that I just listed.

The research techniques being used in this study are quite varied. They range from quite simple methods, such as balance sheet projections, to highly complicated spatial equilibrium models, as well as single and simultaneous equations, and use of Markov processes in measuring changes in market structure. Although this is a marketing project, the first objective was to develop procedures to measure changes in the geographical pattern of livestock production. Since, in essence, this is a study of interregional competition, it necessitates production as well as marketing variables.

One of the more frustrating aspects of the study has been the quest for data on meat consumption by States and data on the pattern of flows of meat from the packer to the ultimate consumer. In this phase we went directly to the meat industry (slaughterers, processors, wholesalers, etc.). Industry officials had varied opinions as to what benefits they would derive from this phase of the study in relation to the expenses they would incur in giving the NCM-25 committee these data. Due to our inability to obtain the cooperation of all the major FIS packers, the specification pattern of flows of meat from State to State was dropped. However, we have obtained the cooperation of most of the major FIS packers in securing meat sales data for use in the meat consumption phase of the study.

In the late 1940's, four regional livestock marketing research committees were established. Although these committees have done excellent work in the past, it became evident more coordination was needed between the four committees. For example, the Southern and Western committees are engaged in projects similar to that of the North Central region. Consequently, an Interregional Livestock Marketing Coordinating Committee was established in 1960, composed of the Southern, North Central, and Western regions, with the Northeastern Committee joining in 1961. The Interregional Committee, as the title suggests, conducts no research itself. Instead it provides the necessary leadership for organizing and coordinating livestock and meat marketing research on a national basis.

~~X~~ APPRAISING OUR COOPERATIVE RELATIONSHIPS -- FIELD AND WASHINGTON ~~X~~

H. L. Stewart, Chairman

Stewart:

It has been indicated repeatedly that our areas of cooperation are increasing greatly. It is therefore appropriate that we are concerned this morning not only with our Washington-Field relationships, but also with interbranch, interdivision, and interagency relationships. We need to give more thought to our interdisciplinary relationships, and our relationships with action agencies both inside and outside USDA. We must keep in mind, too, our relationships with the Bureau of the Budget, with the Secretary's Office, the Congress, the various advisory committees, and the various industry groups at the national, regional, and local levels, if we are to take advantage of some of the new opportunities which are opening up to us.

Our relationships with SCS and ASCS, for example, are much more fruitful than they have been in recent years. We participate regularly within the Department in appraisals of the effects of current and alternative programs. ASCS is putting up funds for us to analyze effects of some of their program. Rural development and area development areas offer increasing opportunities to improve relationships through more effective work. Land management agencies for the first time in my experience, at least, have asked us to do research which will guide them in their land management responsibilities. And we have a number of activities going on at the request of industry groups to help them.

Grady Crowe is going to lead off with a discussion of relationships with land-grant colleges and Washington-field relationships. Grady is with Farm Economics, stationed at Stoneville, Mississippi. Grady Crowe.

Grady Crowe, Farm Economics Division, ERS (Mississippi):

I plan to deal primarily with Federal-State relations at the field level.

The hard core of our relationship in the field is with the Department of Agricultural Economics and with the Experiment Station directors in the land-grant colleges. This by no means implies that we do not have other cooperative efforts. In fact, our cooperative relationship with researchers in other disciplines is a most important part of our total research effort. We have in the past, and we are currently, conducting joint projects with researchers in

the physical and biological sciences. The results of our past efforts have been published under joint authorship with these researchers. Our removal from ARS to ERS has in no way affected our relationship with other disciplines at the field level. How our Federal-State relationship operates at the local level has been demonstrated recently in our studies of agricultural adjustments. State personnel are primarily interested in adjustments at the farm level; ERS is more interested in the aggregated phases and the regional implications of this research. Our joint efforts attempt to get some of the answers to both questions. After all, ERS does have some interest in analyses at the farm level and in our cooperative projects I have observed no reluctance on the part of State workers to move into the area of regional aggregate and regional adjustment implications. It appears to me that a fair understanding of adjustments at the farm level can be quite helpful in interpreting regional implications.

In thinking about this subject, I asked a friend of mine who operates in another discipline what his opinion of Federal-State relationships at the field level was, and he said, "I can answer that very sharply. We have too damn much interference from Washington."

But I am not leveling this criticism of ERS; I do not think they deserve it. I am bringing this up just in case we ever start tending in this direction. This is very easy to do.

I had a session with some of my boys a couple of weeks ago just before they went out on a field trip. We were going over plans and talking about some of the problems we might come up against and how we would resolve them. Finally I said, "I can't think of anything else." And one of the boys said, "I think you have thought of enough. We ought to be able to make some decisions on our own." And he was right. I hope that the criticism cannot be leveled at ERS about this Washington interference.

Cooperative relationships in the field have been built up over a period of years. This is the only way it can be done. Certainly you cannot buy them and you cannot establish them overnight. ERS is making considerable effort to preserve and protect these cooperative relationships. And I cannot overemphasize their importance. We can strengthen these relationships if the field people who know the local situation are given an opportunity to help the people who do not live out there and thus do not know the local situation in developing and maintaining desirable working relationships in the field.

Stewart:

We want to turn our attention now to some of the interdisciplinary relationships and some of the relationships with the industry groups. John Ross, Marketing Economics, stationed at Clemson, S.C.

John Ross, Marketing Economics Division (South Carolina):

I will confine my remarks to the area of cooperative relationships with other Federal agencies and with private industry. I speak from experience that involves cotton research, but I think the principles involved can be applied to other areas or subjects.

Interdisciplinary research is essential if a successful research program in any area is to succeed in the fullest sense. This means that chemists, engineers, physicists, agronomists, economists, technologists -- all disciplines involved and regardless of organizational lines -- must work together. It means not only Government and State experiment stations but research and production people in industry, getting together and actively working as a team. For it is certain that the brains and experience in any one area of effort do not reside wholly within the Department of Agriculture or within any one discipline of the Department. We only research a problem while industry lives with it. It means understanding and appreciation between those different disciplines in the field where cooperation is normally good because of necessity, and also at the Washington level between disciplines and between the field and Washington.

I have heard it said that economists have a much broader perspective of the problems that we face and try to solve than others. If so, perhaps it's partly due to our training. But it is also due partly to the effort we as individuals put forth in getting close to the physical science researchers in cooperative work, to understand the problems and their significance and to try to place a proper emphasis on them. Inevitably this involves a detailed understanding of industry itself and how these research efforts involve all segments of any one industry. We must have the cooperation of industry and it's easy to get if you can be objective in your thinking. We cannot think of our research as being applicable to just one segment without thinking of its effect on another segment. Specifically, we cannot think of cotton research simply from the standpoint of the producer without relating these findings to the merchant, the manufacturer and the consumer. This involves production and ginning practices, quality factors, standards, pricing, marketing, manufacturing and factors having a bearing on its utility to consumers. In this process you're thinking of the commodity, not any one segment of the industry dealing with it, and this is where you usually begin to get industry on your side in research -- if you can be honest and objective in your thinking and in your applications.

We in research can learn a lot from industry. If we do not have our fingers on the pulse of the thinking of industry, on their problems as they arise from the different segments of any industry, we cannot do an effective job in research. We can use this as a means of staying ahead in research, and as a better basis for

understanding and mutual respect. Our findings must be made available in such form that they can grasp readily their significance and their interrelationships. We research for these people -- not for the edification of our cohorts.

Finally, the proof of the pudding is in the eating. I have entree to textile mills that is the most gratifying fact of my professional life and which did not exist for a Department employee in this area 4 years ago. At the same time, farmers and ginners say research we do is the finest thing that ever happened to them. A large cotton merchant calls on us for assistance on some of his problems. Cotton mills seek our advice, bring us data, and request our assistance -- something unheard of a few years ago. This is no tribute to any one man, any discipline or any organization -- but rather to the interdisciplinary effort which has taken place over that time. It reflects the contribution of the industry people themselves, and it involves giving credit where credit is due, even to the extent of remaining anonymous at times.

Industry usually does not care about ERS, ARS, AMS, MED or Farm Economics. It asks a question of a representative of one of these organizations -- it expects to receive an answer or to be told that an answer can be gotten. The degree of success which we have in satisfying industry is dependent upon the knowledge that we have of the subject and, in turn, upon how well we can put the pieces together from interdisciplinary research.

Stewart:

Louis Ducoff, Chief of the Farm Population Branch, is going to discuss Washington-field relations from the Washington standpoint. Dr. Ducoff.

Louis J. Ducoff, Economic and Statistical Analysis Division:

We in the Economic and Statistical Analysis Division and particularly we in the Farm Population Branch do follow an interdisciplinary approach with the other local scientists. We have on our staff stenographers, sociologists both rural and general, and economists. We have a very small field staff -- two rural sociologists and one vacancy. We cooperate with the States on problems that affect the social aspect, sociological aspects and social economic aspects of rural life and population adjustments. We are very happy indeed to have the cooperation of rural sociologists in the States in helping us study the problems of rural population, rural labor migrations, levels of living and certain aspects of the farm manpower and farm labor problem. The fact that we have only a few people in the field

should not suggest that our field relations are limited to the field staff that we directly employ because a much larger part of our work consists of cooperative agreements with the various land-grant institutions whereby we make available some funds on cooperative research. Through these funds we are able to meet a little bit of the needs of rural sociologists in the States whose budgets are frequently very limited to cooperate with us by carrying through on special surveys on special projects. This afternoon you will have an opportunity to hear from Dr. E. Grant Youmans, who is our man from the University of Kentucky, give some illustrative types of work that we do and that he has been directly involved in. You will also have an opportunity to hear from Dr. Cavin a little more about our program. And tomorrow afternoon I hope to elaborate on the matter of interdisciplinary relationships between democracy, sociology and economics. But for the moment I merely want to emphasize that having the field contact that we do does provide us with intellectual and research interaction that is so valuable to finding research that does respond to the need both from our standpoint at the national level as well as the need at the State level.

The history of the work of the Farm Population Branch has numerous instances of research directly applicable to vital issues and vital problems -- problems that have been met by information and data secured and released at very opportune moments. The President of the United States, yesterday in his speech, stated that the great enemy to truth is not the lie but is very often the myth, and when we deal with broad social issues that sometimes seem to hinge on preconceived philosophies and ideas, the danger of the myth is ever present. To illustrate, in the early 50's when the Congress was considering social security legislation, the American Farm Bureau Federation took the position that farmers did not need and did not want social security. Our studies which came at a very crucial time when Congress was considering the legislation proved the contrary. Farmers were overwhelmingly in favor of the social security legislation and our studies were rather crucial in the consideration of the legislation by the Congress.

Stewart:

Winn Finner, Assistant Director of the Marketing Economics Division, is going to discuss other research groups.

Winn Finner, Marketing Economics Division:

I have two ideas that I am happy to mention. First is the simple one of reminding the group that in addition to our cooperative relationships with State colleges and other organizations mentioned

earlier, we do, at least in Marketing Economics, have use for material from other Federal agencies such as the Maritime Commission, ICC, FTC, and BLS, not to mention the Bureau of the Census. Also our contract relationship with private research firms is producing certain information which otherwise would be difficult to obtain. We are aware I think of the attitude of the Presidential Advisory Committee recommending that contracting should be scrutinized more carefully in the future. I think many of us agree that contracts have been given too much emphasis. Nevertheless we have found some firms that can help us. We have no accountants on our staff and some private research firms have proven useful in providing such talent. We have also found it useful to contract with organizations equipped to collect large bodies of field data, particularly where we wish to do this only one or two times. I should also add that we have found some contracting firms to be of little use to us.

My second point concerns a suggestion for modification in our methods of approaching a research problem. I think if you were to ask many of the research people in this room where they get their ideas for the research they work on, they would say, their own thinking, research, advisory committees, and trade publications.

I contend that most of our sources are in fact secondary sources. We are waiting for someone else to tell us about a weakness or about a new development we ought to examine. I would also contend that much of our work with private firms is quite narrow. True enough, we know something about their costs, their packaging, their handling, their grading or whatever their specialized practices are that we are looking at, but it is rather infrequent that we have information regarding financial status and other aspects of firm operations as was mentioned, for example, in the discussion of the producers panel of farmers earlier this morning. We do not now have the pragmatic information necessary either to properly visualize some of the trends or to employ newer methods of analysis being developed.

Consequently I suggest three specific actions. First, I like Bob Clodius' idea that we look upon our field staff as an antenna system, useful in developing early intelligence regarding new developments and problems being encountered by marketing firms, agencies, and producers. Secondly, I believe that we should attempt to make greater use of Extension Service personnel for the same general purpose. Thirdly, I think perhaps we also need to diversify the kinds of talent on the ERS staff. Specifically, could we not use a modern Lincoln Steffens -- who perhaps was not particularly well trained in economics, but had unusual abilities in observing methods employed in marketing agencies, and the reasons for these methods. Such individuals might also be likened to reporters for some of the principal business periodicals and would have the capacity to identify at an early stage the new and changing problems. Such individuals working in close

teamwork with economists should be able to introduce a greater reality to our work and should enable us to get into some areas of growing importance sooner than we otherwise would.

Stewart:

Kenneth L. Bachman, Director, Development and Trade Analysis Division, will discuss relationships with our foreign friends and other agencies with a direct interest in foreign agriculture. Dr. Bachman.

Kenneth L. Bachman, Development and Trade Analysis Division:

As a foreign representative on the panel it was suggested that I talk about cooperative relations with: (1) FAS, (2) foreign institutions, (3) AID. I would like to add one -- our relations within ERS. I think this conference is one step in getting across what the foreign side of ERS can contribute to the total ERS research program in general and to domestic research in particular, and also what the domestic research side can contribute to us.

Turning to our FAS relations, I think they are very good right now. I hope that they stay that way. The Development and Trade Analysis Division and the Regional Analysis Division are probably the only two ERS divisions that are regularly invited to attend staff meetings of another agency. We have participated in most of the important policy studies. Also FAS has made available very substantial local currency funds for financing certain research projects overseas. I believe the Regional Analysis Division now has either completed or in process some 18 studies dealing with supply and demand projections for various countries. DTA has five studies relating to the impacts of P.L. 480 on economic development and trade. In addition, there are lesser numbers of studies in several other fields of activity of the two divisions. The funds provided by FAS provide for financing the contracts, travel, supervision and consultation.

Looking at our relationships with foreign research institutions, it is important first to emphasize that this work is carried on on a contract or grant basis. In addition to the contracts financed from FAS funds we have certain funds earmarked by ARS for grants for research on problems of mutual interest in foreign countries. This work currently is relatively small but is expected to expand. One of the problems in the foreign research area is that the results obtained under the contract or grant methods of operation are somewhat variable. Another problem, particularly under the grant program, is one of getting the type of projects that are of most interest to our research program in ERS. It is hoped that as our personal contacts are developed this problem will be reduced.

The third area assigned was the area of AID cooperative relations. I think I can summarize the present status of this as one of "delightful confusion."

Stewart:

Charlie Kiefer, Director of MOS, is going to conclude our discussions of relationships. Mr. Kiefer.

Charles F. Kiefer

I thank you gentlemen. This matter of our cooperative relationships is very important. We have it both on the formal side and on the informal side. On the informal side it shows up in a wide variety of ways. There is no payoff which is clearly apparent. But it is highly valuable throughout the Department of Agriculture as has been brought out in this conference.

One of the things which is going to come down the pike in the months that lie ahead, perhaps in the weeks, is the role that you will play one way or another, both in Washington and in the field. First, to keep yourself informed on the new program and to support the Department in the effort that has to go on irrespective of the outcome of legislation now pending in the Congress. This I consider to be a very valuable part of our cooperative relationship particularly at the Washington level.

On the formal side as the gentlemen who preceded me have said, we have a vast network of formal relationships throughout the Department, throughout the Government, and throughout trade and industry. These things have to be committed some way in writing and do have to go through a formal system of bureaucratizing. And they do show up, my friends, in the annual budget of the agencies. At the present time we have about a million dollars or so coming into ERS from other agencies for research work other than the contract work which Bachman and Anderson consider. So, this is important and I think this cooperative work must reflect, first, a quality product and secondly, that it does facilitate policy decisions in a constructive way. It needs to be channeled into the informational channels of the Congress, particularly those of the appropriations committees, and each of us must be better merchandisers of this product with everyone with whom we deal.

I am delighted to have had Mr. McGregor here. I know that this week will pay off for him and I hope that he doesn't think that we are looking for a payoff from him because he can't give it. Thank you very much.

## PROGRESS IN ECONOMIC AND STATISTICAL ANALYSIS

Kenneth E. Ogren, Chairman

James P. Cavin, Economic and Statistical Analysis Division:

The work of this division is best understood in terms of its history. It is the lineal descendent of two divisions in the Bureau of Agricultural Economics established in 1922 under Dr. H. C. Taylor. These were the Division of Farm Population and Rural Life and the Division of Statistical and Historical Research.

The Division of Farm Population and Rural Life antedated the BAE. It was established by Secretary Houston in 1919 following recommendations of a committee headed by Professor T. N. Carver of Harvard University. The first head of the division was Dr. C. J. Galpin, Associate Professor of Agricultural Economics at the University of Wisconsin, who had charge of courses in rural life.

In terms of the committee's recommendations, the basic orientation of this division was sociological, within a framework of extensive cooperation with the State colleges. Among the specific fields of research recommended by the committee were the rural home, relation of educational and religious institutions to farm life problems, rural organizations, social aspects of tenancy, and social aspects of various types of farm labor.

Although the work of this division was strongly endorsed by the colleges and by social scientists generally, support from the Congress was never very strong. However, the work was strengthened by the Purnell Act of 1925, which specifically named sociological research as an appropriate area of work. Some further strength was added in 1936 by the transfer of research on farm population and farm labor from the Division of Land Economics. In that year, the direction of the division was taken over by Dr. Carl C. Taylor who served until 1952. His successors were Dr. Margaret Jarmon Hagood (1952-62), and Dr. Louis J. Ducoff who was appointed this year.

In recent years, three principal lines of work have emerged: (1) farm population and migration; (2) farm and rural manpower analysis; and (3) changes in the level of living and the relative well-being of farm people. Within each of these areas, increased emphasis is being given to projects related to rural area development. Most of this work is carried on in Washington. We have professional personnel at three or four State colleges and cooperative or consultative arrangements with a considerable number of others.

The name of this division has undergone several changes. During the regime of Howard Tolley, it was known as the Division of Farm Population and Rural Welfare, but later under Oris Wells, went back to the original designation of Farm Population and Rural Life. The organization is now known simply as the Farm Population Branch.

The development of statistical and historical research will get the most attention partly because of its relative large size compared with the old Division of Farm Population and Rural Life, and partly because of my greater familiarity with the details of its history.

When the division was established in 1922, it was put together from bits and pieces out of the Bureau of Markets, the Bureau of Crop Estimates, and the Office of Farm Management and Agricultural Economics.

The first head was Dr. O. C. Stine, who came to Washington in 1916 as an economist in the Office of Farm Management to do historical work for an atlas of American agriculture under the direction of Dr. O. E. Baker.

It is difficult to say exactly what forces brought about the establishment of this division, but I have a hypothesis or two about it. Whereas the Division of Farm Management reflected in large part the problems that arose within the farm sector, the work of the Division of Statistical and Historical Research reflected the outside forces that were impinging upon agriculture, including both international influences and the impact of the nonagricultural sector of the economy on farm prices and income. Assessment of these forces involved aggregative analysis of a quantitative character, and it is no accident that such measures as the parity index, the index of farm marketings, and the estimates of farm income were initiated in this division. The word "historical" got into the title because of Stine's belief that well-rounded economic research involved not only the analysis of quantitative data, but an understanding of long-time trends and historical influences.

Great emphasis was placed initially on foreign competition and demand, but this became an area of such scope and importance that the foreign work was detached from S&HR and eventually grew into what is now the Foreign Agricultural Service.

On the domestic side, analysis of the demand for farm products developed into the economic outlook service which provided a regular flow of economic intelligence to American agriculture. This was accompanied by an expansion of statistical analyses of factors affecting the price, demand, and supply of farm products which were needed to provide an increasingly strong base for outlook appraisals and forecasts. One can hardly overemphasize the close interrelationship between these two lines of work. As a matter of fact, a large proportion of the staff was engaged in both activities. This is still true at the present time.

The importance of the farm income work was recognized from the start and it grew steadily. From rough national estimates of cash income for some of the principal crops, the division moved on to annual estimates of the total net income that farm people get from farming; the income that they obtain from nonfarm sources; and the per capita income of farm people from all sources compared with that of the non-farm population. Ultimately, estimates of cash receipts from farm marketings by States were established on a monthly basis. From the beginning, the income work was integrated with that of the Department of Commerce, and the agricultural portion of the national income estimates have long originated in this division. In addition, the farm income work has provided the basis for improved concepts and measurement of parity income.

The history work did not develop in quite the way that Stine had envisaged. Instead of being an integral part of economic analysis, it became, under E. E. Edwards, an area of work tied more definitely to history as such and to political science. This development has provided a stimulus to the study of agricultural history as a specialized discipline, and was an important factor in the establishment of the Agricultural History Society. The history group also developed important service functions, including authentication of the historical accuracy of Department publications, and providing top officials with authoritative statements and documentation of historical events and official actions. New administrations have an initial tendency to view the work in agricultural history with a fishy eye, but soon learn to utilize its resources and appreciate its worth.

By the late 1930's, the work of the division centered in four areas; namely, outlook, commodity price analysis, farm income estimating, and agricultural history. Just before the Second World War, two additional functions had been added. One was estimation and analysis of food consumption, which was a natural complement of the farm income estimates. The other was statistics service, under which most of the economic series in the Department were centralized. The original organizer and coordinator of this work was Mr. Nathan Koffsky.

The development of these lines of work had certain consequences in terms of the skills and characteristics of the division. The specialists responsible for the commodity outlook reports acquired an intimate knowledge of demand-supply relationships which placed them in a particularly good position to evaluate the impact of proposed program changes on the economic position of the various commodities. Furthermore, the results obtained for the individual commodities could be readily translated into such aggregates as farm income, the volume of farm marketings, and per capita food consumption. Consequently, S&HR became a focal point for analyses of the economic impact of farm program proposals at a relative early date.

The skills marshaled for this purpose were also applicable to long-range projections, and the division has exercised a considerable degree of leadership in this area throughout the period following World War II.

I think something should be said about changes in personnel and organization. Dr. Stine was head of the division from 1922 to 1946. I served as chief from 1946 to 1951, and was succeeded by Karl Fox, who remained until the end of 1953. With the establishment of the Agricultural Marketing Service in 1953, further organizational changes took place. Dr. F. V. Waugh returned from the Council of Economic Advisers to be head of a new Division of Agricultural Economics. This was comprised of three branches. The first of these was Farm Population and Rural Life, headed by Dr. Hagood. The second was the Farm Income Branch, which was carved out of S&HR by detaching the work on farm income estimates and the overall economic outlook. This branch was placed under Nate Koffsky. The remaining work on commodity outlook, commodity price analysis, food consumption, and statistics services continued to be designated as the Statistical and Historical Research Branch. I returned from the Division of Statistical Standards of the Budget Bureau to head this branch.

With the coming of ERS, the Agricultural Economics Division of AMS became the Economic and Statistical Analysis Division -- a rather broad designation to say the least. Further fragmentation took place in the branch structure. The Farm Population Branch remained intact, but from the Farm Income Branch and the Statistical and Historical Research Branch, four branches emerged: Farm Income, Outlook and Projections, Commodity Analysis, and Agricultural History.

These changes reflected the growing importance of agricultural history and the new emphasis on long-run projections, as well as the availability of professional personnel capable of assuming larger responsibilities. In the main, these changes are probably for the best, and it is hoped that the emergence of these quasi-independent branches will be consistent with a high degree of integration in the work of the division as a whole -- a characteristic which has been a prime source of its strength over the years.

E. Grant Youmans, Economic and Statistical Analysis Division (Kentucky):

Every society in the world today, including the United States, is confronted with two fundamental problems. One is how to organize itself so as to carry on the basic economic, political and social activities of the society. The second is how to train, educate and orient its youth so that they can carry on these activities. The technological changes that have taken place in the last few decades have upgraded the occupational structure of our society. Youth today needs more education, better training, and higher competence to step

into the jobs which society is offering. Contrasting this situation with the fact that a high proportion of boys and girls drop out of high school before graduating, you can see that an acute social problem has arisen.

In Kentucky, or rather in the southern region, we have three projects focusing upon problems of youth that are particularly related to education. These studies are initiated and carried out jointly by the land-grant colleges and ESA.

One study made in Kentucky was designed to learn more about the factors that cause youths to drop out of rural schools. We found that the social-economic status was one factor, but especially interesting was the fact that the values of the family, as represented by the mothers, had an important bearing on whether boys and girls stayed in school or whether they dropped out. It is significant that these values existed and were important regardless of the social-economic level of the children. Also, we discovered that those boys and girls who established a significant role for themselves in the school system tended to remain in school. Those who did not, tended to drop out. Part-time work was also a factor in keeping boys and girls in school.

A second project being conducted in Kentucky focuses upon youths who have migrated from eastern Kentucky to urban areas of southern Ohio. We found that if a boy remained in eastern Kentucky and graduated from high school, he was considerably better off than the boy who dropped out and remained in that area. However, if he moved to southern Ohio, his educational level made very little difference. In other words, the high school graduate did not fare any better than the boy who dropped out before graduating. We don't know exactly what this means, but it suggests that the education youths get in a rural community does not prepare them adequately for life in an urban community.

A third study is being conducted through a cooperative arrangement with the University of Florida at Gainesville. Here we are probing a hypothesis that has emerged in other studies. These have indicated that rural youths by and large do not fare as well in our society with respect to occupational achievement, and we are investigating the hypothesis that this is due to lower levels of aspiration. We are getting data on family background, educational experience, work experience, personal values, and the like. The data are just being collected, and conclusions have yet to be drawn.

A fourth study that I will mention is at the other end of the life cycle and deals with some of the problems of older people. By all the standards that were used, the older rural people appear to be worse off than similar urban people. In terms of income, the latter had about three times as much, but this was not as important as other factors. The rural people, age 60 and over, seemed to be preoccupied with

problems of health. Fifty-four percent of these people said that their health was a problem, but only 29 percent of the urban people said so. In terms of mental outlook generally, the urban people were more optimistically oriented than the rural people which is in contrast to a widely accepted notion that the rural areas offer special advantages to older people in terms of such things as peacefulness, fresh air, and close family relationships.

## XRECRUITING, TRAINING, AND KEEPING PROFESSIONAL RESEARCHERS

### Wilhelm Anderson, Regional Analysis Division:

Over the years in the Regional Analysis Division, apart from a few recruits that have been brought in in the higher positions, we have brought in junior professionals. In this past year, we met with more difficulties filling about 12 or 15 positions than any year that I have been Director of the Division.

In the foreign work, we look upon economists somewhat differently than Hugh Stewart would or Ken Ogren. We, perhaps, do not differ too much with the ESA Division.

We have 110 countries. We don't study individual farms. We study economies of foreign countries. We don't necessarily need lengthy training in farm management, but we find land economics quite useful. We are interested in men who are well trained in economics. While we would like to have them born on farms, with some farm experience in their bones, it is not absolutely necessary. We just hired a Ph.D. with no farm experience. He reads, writes, and speaks Russian and he reads some of the east European languages.

We must have people in the division who have language competence. A man is not too useful in our shop unless he has command of some languages.

Let me tell you what some universities are doing for us that the land-grant colleges are not doing. They give extensive training in certain areas of the world. They give training in the Far East, in the Middle East, in Africa, in Latin America -- extensive training -- economic and geographic training which is highly useful now. We have prevailed upon the Director of Personnel to permit us to hire some people and I think increasingly we will hire people who are straight economists, and who have some training in the areas which they will be assigned.

We have an arrangement with the Foreign Agricultural Service that we train attaches for them so we hire people we think will make good attaches. We further have an understanding that we will accept men who have spent years in that field and put them on our staff. They will accept men from us and give them 2 or 4 years' training abroad. This is highly useful to us in the work we are doing, and we hope that some of you who are present here may someday have occasion to say to us, "We would like to be considered for a foreign assignment." I think the experience is good.

Louis Upchurch, Farm Economics Division:

I would like to echo what Ogren said about "research is people." Research is not bulldozers or data computers or anything of the sort. We have to have those things, of course, but research is people.

Recruiting, as I define it, is everybody's business -- yours, our personnel people, our professional personnel, and everybody else's. We have had a tendency in recent years, particularly, to want to recruit people who are "finished" with their training. We have been hiring more of our people lately as Ph.D.'s or nearly Ph.D.'s. One of the problems we've been running into is at that level we have greater competition for these people, and, therefore, more difficulty in filling some vacancies. Perhaps one of the outlets that we have to meet this kind of problem is to catch them young. Catch them at the master's degree level or even the undergraduate level through a system of student trainees. We had a system in Farm Economics through the Agricultural Research Service a few years ago of a student trainee program that I think by and large worked very well. There was some attrition to be sure -- some people we got we did not want to keep but we got some very good people that way -- excellent ones. However, when money gets tight the student trainee program is often the first to go. Perhaps we should consciously budget more of our funds for a student trainee program.

Secondly, in the recruiting problem we need to be more conscious of the qualities of the individuals we seek. I got the impression from several college people recently that they would welcome some suggestions from us as buyers of their products, if you please, as to what kind of products they should be producing for the Economic Research Service. A suggestion as a possible course of action in our professional societies, such as the American Farm Economics Association, the Western Farm Economics Association, and others -- is some formalized way to get together with our colleagues in the colleges to give them a better idea of what kind of product we look for, what kind of product we want out of the graduate school. By and large we take what we can get and are glad to get it. But very often the training is not specific to our needs.

On this same point, we have a "public relations" job to do with our colleagues in the colleges with respect to the image that Government service has on many academic campuses. It is unfortunate and I think entirely without reason, that people who work for the Federal Government are somehow second class citizens in the academic world. There is no reason for this. I feel, and I'm sure you do too, by the very fact that you're here, that our work is just as sophisticated as that of the academic institutions and in many instances more so. But one of our recruiting problems is this one that somehow working for the Federal Government is second class.

In keeping personnel, the salary issue, of course, is an important one. The salary issue, however, is not everything. One thing that we must keep in mind in keeping our personnel is to be sure that we get the right people in the right jobs to begin with. Then we have less difficulty in keeping them. The people we lose often are those that we perhaps should not have recruited in the first place.

Joseph Findlay, Division of Personnel, MOS:

I should like to review, first, the recruitment effort that has been made by you and by us, over the country during 1962 which points up problems ahead and the necessity for continuation on a more organized and systematic basis. The total yield of contacts made at your respective college locations that we know about, involved 23 schools with 145 candidates interviewed. These were pretty much evenly divided between the doctor's level, the master's level, and the bachelor's level. We have corresponded with those people who have been identified to us to ascertain their degree of interest in coming with the Economic Research Service and the Statistical Reporting Service. The response that we have had and the show of interest would account for about 11 doctorates, 16 masters, and 5 bachelors for a total of 32 people, so the actual show of interest in relation to the total contacts undertaken is relatively small.

As we look back on the period January through May 1962, accession in relation to separation in ERS, we had a net gain for the first 3 months of about 16 people, but we didn't fare as well in the latter 2 months of this period -- in April and May -- when we had a net gain of only 1 person. In other words, our accessions during that period of time just kept pace with the separations.

While some of this may appear on the gloomy side, we do want to undertake a more systematic effort both from within the Division working with you as designated recruitment representatives at your colleges' location to see if we can't keep a flow of candidates moving through the Central Examining Board, so that we do have supplies on hand there which are of quality nature. We do have supplies now. The degree of quality that is represented I won't comment at this particular point. Present registers contain 153 candidates of which 51 are currently under consideration for filling existing known vacancies for the rest of 1962.

A word about our clerical recruitment program which is of principal interest to the Washington division. This has been rather localized in two States where considerable contacts and testing have been done. For stenographers and typists we have tested 185 in one State and 100 in another State and have come up with 82 and 62 candidates, respectively.

In the area of training, we had quite a sizable participation. Out of a total in ERS of about 1,000 people, we had total participation in in-service and out-service training of 271 persons. They account for a total applied time and training of some 7,160 hours out-service training under the Training Act, and about 3,000 hours under the in-service training arrangement. You could be helpful to us both in the Washington and field levels in analysis of your training needs for this year on a considered basis. We presented these last year on a rather hurried basis after opening shop on May 1 and having to send these into the Department by the first of July. Any evaluation of your employee taking outside training would be helpful to us for evaluating those programs for additional participation or in no further participation.

James P. Cavin, Economic and Statistical Analysis Division:

I'm going to stress the outside factors rather than the inside factors. The pay scale problem is with us and until that is solved, we're going to have a major hurdle.

Another outside factor beyond our control is the Federal classification system. I'm not talking here about our "incentive" classification problems. I'm talking about the whole structure that comes out of the Civil Service Commission, which is efficient in many respects.

Finally, on a matter analogous to what Upchurch said on the question of the image. This relates to and depends upon the success of the farm program. One of the reasons it is difficult to get people into the USDA is a sense of frustration. Actually, there has been more economic analysis done on the farm problem than any other economic problem in the country and generally it has been high class analysis. I'm prepared to argue the competence of the agricultural economists versus the general economists any day in the week. But unfortunately, all the work that's gone into the development of programs hasn't paid off. I came in 26 years ago; we were really on the move or thought we were. After over a quarter of a century when you find that the situation is worse than when you came in, this isn't something that inspires one to get out and sound the call to the youth. Now I do think that people like John Schnittker, the Secretary, and others are successful and actually are beginning to get some programs that are successful. This will turn the thing around and make the matter a lot easier for us.

One other thing. In our own division and branch, we have gone outside of agriculture a good deal but we are very anxious to get more people from the land-grant colleges. And don't let the emissaries from Farm Economics and Marketing Economics kid you into thinking that we don't hire anybody from the land-grant colleges, because that isn't so.

Douglas D. Caton, Farm Economics Division (California):

Among the points that might be made about the best procedures to follow to recruit, train, and keep research personnel three points stand out above the others and they, collectively, are largely responsible for any success we may have in getting and keeping good research people. The three points are: (1) The prestige (the position in professional research circles) of the organization; (2) personal rather than impersonal personnel and promotion review procedures; and (3) salary and fringe benefits for duties and work performance that are comparable with the major agricultural colleges and within the USDA regardless of location.

Prestige is a number of things, some of which are clear and definite and others of which are fuzzy and obscure, but they can be summed up in what we call attitude, a willingness to be associated with a group or institution. A prestige organization is built upon the competence of the people in the organization, upon the flexibility that is allowed the research interest, and upon the administrative attention that is given overall performance.

In my experience with recruitment as ARS field recruitment representative, and my association with ERS personnel going through the Ph.D. program at Davis and Berkeley, I find that the questions asked can be grouped into three categories: (1) Who are we going to have an opportunity to work with? Who is outstanding and from whom can I gain valuable experience and training? (2) What am I going to have an opportunity to work on? What choice can be made as to subject and techniques? Recruitment is usually for a particular, and often very limited, piece of work rather than for subject matter field. (3) What opportunities does USDA service provide me, providing I measure up, to move to other lines of work than research or to other lines of research, or to move to a major land-grant institution?

Answers to the questions lead to a series of additional questions and to the question as some members of the land-grant colleges have said, perhaps many have said, that the USDA, as far as attracting the top candidates is concerned, is in the same prestige category as some of the major Universities such as North Carolina, Michigan State, Iowa State, California, or Illinois, Wisconsin, or Minnesota.

As to personnel procedures and standards, no one, no matter who he is, wants to believe that others look on him as merely an identity to replace a cog that is missing, or to fill an opening in the ranks, just another body. Research personnel are particularly sensitive in this regard. This means that recruitment is not unilateral. The candidate is also making his own review and recording his own reactions and opinions. He reacts to the recruitment procedure, to the recruitment personnel, and to how he sees his opportunities, from the facts presented, and from what he can gather from the opinion of others.

Recruitment is preferably carried out on a personal basis for the reason of persuasion and for the reason of interpreting and elaborating on the information in the brochures, in job descriptions, and to explain in detail the research program and research requirements of the USDA. Personal letters, but not form letters, have a place for purposes of initial contact and inquiries about interest but there is no substitute for personal contact and discussion. If possible, the candidate should be provided an opportunity to look a place over and to talk to the people with whom he is going to work.

If a recruiter is used, he should be well informed about rating and appointment procedures, about matters relating to salary, salary increases, and associated benefits such as insurance, leave, and retirement; and above all else he should be able to sell himself, and the USDA. In this regard, it is helpful if the representative has some stature in the field he represents. Personal attention to applications and rapidity in their processing are also of great importance.

Among the points that can be made about what is important to recruitment and to the willingness to be recruited are: (1) Attitude of recruitee toward the USDA; (2) location; (3) salary; (4) flexibility components in research problems selection and application of research technology; (5) flexibility in the promotion procedures and access to other programs; and (6) opportunity to move laterally or vertically within the USDA and to opportunities which may exist outside the USDA.

The question of teaching, or the teaching privilege, always comes up. The desire of graduates to avail themselves of this opportunity is almost universal. Again, many reasons exist for its presence, but it does make recruitment difficult for some locations. In many cases, the mere fact that the opportunity is available is sufficient, but for other cases it is a very real and vital consideration.

One thing of great importance in retaining research workers is a strengthening of the personnel review and promotion procedures. I should hope that we would someday no longer find it necessary to knock on the Administrator's door and ask for consideration or to run a job offer through the mill to test the promotion prospects. Some are in the fortunate position of receiving offers rather continuously, others are not; but in any case the entire procedure seems sort of unnecessary in view of what's in the regulations.

The "Career Plan for Research Scientist" looks good on paper because it recognizes that some people like to remain with research and under the plan they can avoid going into purely administration work in order to get more money. Many believe, however, that it will never really become a part of every day practice. Consequently, the way seems open to constitute an independent body which would have as its function to review each person's case each year or at the most

every 2 years and to find out whether a person has been considered for promotion, why he has not been promoted, and if he should not be promoted whether he has been notified of the reasons. Otherwise, I see no real hope of ever correcting the present situation, that of using job offers.

On the straight mechanics of recruiting, I believe that the main recruitment problem centers on the top 20-25 percent of the graduates but that there are ways of solving some of these problems. I also believe that while there are salary and incentive problems in retaining research people, that the way in which people are considered can solve some of these and a directed effort to implement present regulations will solve others. As far as training goes, I am strongly for continued support of graduate students. The results have been very good and have more than justified the expenditures as measured by the quality of the people recruited and the research accomplished.

Salary isn't everything, but in one way or another it is related to things that are worth having and it gives a certain amount of prestige and class to a job. I won't dwell on where I think Federal salaries are, competitively, because I am sure you are well aware of how they compare.

As far as salaries and promotion are concerned, field personnel have traditionally been confronted with a ceiling. In the past the argument has been that without a ceiling, extreme difficulty would be experienced in getting people to come to Washington. I believe that important work is being done both in the field and in Washington, and good people are needed both places and that a person should be where he works best, where there is important work to be done, and where the work to be done is within his capabilities.

### Discussion

#### Sundquist:

One of the real problems that some students have is the inability to get their way paid into Washington to look at a job. Looking at a job is a pretty important thing. Is there any vehicle to help on this score?

#### Findlay:

Only for those occupational groups that are in scarce categories can such expenses be paid. In other words, we would have to prove the scarcity of candidates before we can use such authority.

Crowe:

These gentlemen have outlined a problem in some detail. They didn't bring up all the details such as the competition we have for these recruits. I am speaking of the kind of competition that can interview a man and make him a firm job offer and hire him in the same day. It takes just a little bit longer; also, this trying to meet competition is forcing us to recruit at levels above the grade that some of our men now hold that have been with us for some time and who are quite competent. Do we have any plans for trying to correct this situation, and, if so, what are they?

Findlay:

Grady, you apparently refer to the rating procedure under the Central Board of Examiners. We are being as persistent as we can be to retain the Central Board of Examiners within the Department in the area of agricultural economists. This is under review at this moment in connection with the development of a new occupational standard for economists. There is no shortcircuiting other than trying to speed up the time from you into the Board of the papers on the individuals to have them rated as quickly as possible. But this is an inherent problem under the competitive examining system which cannot be avoided as I see it.

John E. Wildman, Division of Personnel, MOS:

As you know, we can't compete with industry by offering a job on the spot. We have first of all examination procedures, ratings, and competition among candidates. Even though you find a man, we still have to get him on a register and within reach under the rule of three. There is one provision in the Civil Service regulations which would permit us to do exactly what you are saying and that is, if we hired everyone who is available we could hire them on the spot. But, I don't think ERS or SRS are willing to hire everyone who is available.

I am going to refer back to an earlier question. There is one other way that we can bring people in here to look over and participate in our activities, and that is for conference purposes. If you are having a conference or a meeting discussing the work of the organization, we can bring in a private citizen to participate in that and pay his way going and coming. We do not pay a salary since such an arrangement is without compensation.

Randolph Barker, Farm Economics Division (New York):

There is a limit to how far you can go on recruiting. This is partly because I think we are running into a period of a shortage of supply of available people. I can't help but be impressed, coming down here periodically as I do, with the degree with which each division raids the other division. Maybe we have to evaluate some of our objectives and maybe think about the vacancies in terms of cutting down what we are trying to do and put priority on some of the work we are doing. I realize this is an unpopular thought, but it is the number of people we can get hold of and not the money as we pointed out earlier.

Findlay:

That, I suppose, needs response not only from me but from program directors here. It seems to me we should have a positive goal of quality recruitment. We do have many facilities working through you in the field to examine first for quality candidates. We have a number of eligibles on the registers, as I indicated. There are approximately 150 and I do not take a position on which are qualities and which are not. Certainly these people should be looked at most carefully from the standpoint of not only the immediate current recruitment needs but the 1963 need as well.

Upchurch:

Obviously, there is a shortage of supply. We are in part responsible for this shortage. Now, you can't do research with money. You have to have people to do research. Sometimes when we've had money we have farmed out research jobs to colleges and occasionally to private research institutions. When we give these institutions money to do research that we want done they in turn obligate personnel. So, we have contributed to this shortage in supply in this way.

Koffsky:

When a young man comes in to see me I route him to whatever division he expresses any interest in. In other words, let him see all the divisions and make his own choice about where he wants to work and who he wants to work with. I think this will help all of us.

Now, another thing that has been brought up here is the idea of shifting people within divisions. It is a wonderful idea if you can get it accomplished and I am in favor of it. I don't know how to do it. But, I think this is a way to get to know one another and know how work fits in with one another.

We are going to have to depend on you fellows in the States -- not only for Farm Economics or Marketing Economics, but bring us the best you can and we'll find spots for them here to work on the things they want to work on. Our foreign divisions don't have any men in the States, and, yet, there is a real challenge to a young man coming out of agricultural economics in that field and they are interested in working there.

MAKING THE PRODUCT OF ERS MORE USEFUL,  
MEANINGFUL, AND EFFECTIVE

Nathan M. Koffsky, Chairman

Koffsky:

This subject has come up several times already in the conference discussions. The word image also keeps creeping in. John Schnittker, who represents the SEG group, gave his talk last night. I think many of the ideas about how to make research more useful and meaningful for policy decisions were well covered last night. If there are questions that come up after today's discussion, I will try to handle them.

As our first panelist, I introduce Raymond C. Scott, Director of the Agricultural Economics Division in the Federal Extension Service. Dr. Scott works very closely with the Economic Research Service, and will speak from the viewpoint of the Federal Extension Service.

Raymond C. Scott, Agricultural Economics Division, FES:

I appreciate this opportunity to meet with you folks. I would like to approach this subject perhaps a little differently than may have been envisioned by the program committee. I want to address myself directly to the subject dealing with users, but I will touch on some of the changes that we feel need to be made in order to make some of this information more useful in terms of availability.

Just a word about the Extension Service for you folks who are not familiar with this organization. We have a small contingent in Washington. Instead of a 55-45 Washington-field product mix that Leonard Stewart spoke of this morning, we have a 5-95; the 5 percent in Washington. In Extension we have about 500 economists. Most of them are at the State level, although we are getting a number in production economics and farm management working at the area and a few at the county level. Our job in Federal Extension Service is to serve as the educational arm of the Department.

Now I would like to take off on a comment or two on Leonard Stewart's speech this morning. He said we have been criticized because we have not educated the public on farm policy. And he also talked about the interrelationship with action agencies, with other research groups, the Secretary's office, and the Congress, but he didn't mention Extension Service. Of course, I caught this. I would like to remind him that although he was putting Extension into this action agency group, that we don't put ourselves in this category. Our job essentially, as we see it, is the application of research to help people solve problems. We, I think, have made tremendous progress in

the last few years, although not nearly as much as we would like in moving to a problem-solving orientation. For example, we have an experimental program which we hope to start in Illinois this year to help economic development groups in southern Illinois to appraise the potential adjustments that are necessary to achieve certain specified income levels at the farm end as well as adjustments in the marketing system. In working with these groups you help them answer questions dealing with the subject.

Now obviously we need an awful lot of input-output data and we need an awful lot of interregional analysis which, you can see, poses some real problems. We have had a close relationship, and we are quite proud of it, with many groups in ERS -- with your commodity and functional areas in marketing. We are cooperating in one of your research projects with some of your folks in Lincoln, Nebr. We work closely with Outlook and with farm management and production economics. In the last 2 or 3 years we have broadened our effort to devote more attention to international trade, starting with a group of foreign seminars in which we sent about 20 people overseas about 3 years ago. We are sending four groups starting Friday of this week to different areas of the world to study the situation in an effort to broaden and further develop our state relations and understanding.

Now I would like to talk about a few of the areas in terms of application and in terms of how we might make ERS research more effective. We have had an active public policy educational program going which we call agricultural policy. During the last administration, we called it public affairs. I don't know what we call it in this administration, but it deals essentially with agricultural policy and other public policy issues such as zoning, schools and the like, but focused heavily on agricultural policy. The long run projections of ERS have been extremely helpful. But we have had to depend to a large extent on spot studies here and there in the land-grant colleges as far as much of this work is concerned. Most of our work has been developed with groups, committees, task forces, and so on, from the land-grant colleges.

But now we are running into problems. Let's take the most recent one, the economics of national marketing agreements and orders. Now we are faced with this issue not after the fact but before the fact, and our concern deals with the economic impact of, let's say, a national marketing agreement and order on the turkey industry. These are the kinds of questions farmers and the industry are asking us. Although it is difficult for you folks to gear up to provide these answers, I think, by closer working relationships, that we can pull together as much analysis as possible. We have worked with some of you on this subject. The most objective information we have is a few speeches made by some of the folks in ERS which we have used throughout the country.

Another area that we are quite concerned about today is resource development and adjustment and one in which our Administrator is committed to placing a great deal of attention in the coming months and years. One of the real problems we run into deals with methodology of helping local communities analyze their economic alternatives. Another of the real problems is more information on interregional competition. These are very real questions to the local businessman and the local farmer who is concerned with possible economic development in these various rural areas in connection with the rural development program. We need a great deal more data, and we appreciate our working relationships with John Southern and others of you. In international trade, probably one of the areas of greatest concern in the last 6 months has been what is the economic impact of the Common Market on various parts of American agriculture. We are approached with these questions very early in the game after an issue comes up. And this is one of the real problems in getting objective information and extending it. I don't know what is the most effective way to do it. We are going to have to find some way of more effectively working together, perhaps long before a study is completed. We do some of this with AMS today, particularly in the retailing area where we work right along with AMS on some of the research areas. Frequently, from 3 to 4 months before a publication has been issued, we are using it in the field in our educational program. We have had excellent cooperation in outlook work. We are thankful for one thing that ERS has done in this area and that is to have devoted more and more attention to farm investments to explain that they must be based on longer run considerations rather than the price of a commodity next year.

Another area of concern to us today is, of course, farm management. We are going to be pushing farm management very heavily in the coming years. We are already, in many States, putting people with master's degrees either on the regional or county level within the State at pushing this idea of more work on business management. Here we run into some real problems of having sufficient input-output data to really work with the farmers on some of their important problems.

I would like to spend the remainder of my time on some ways for making this research more effective and getting greater application. I think it starts back with cooperative planning both of the research and educational programs. I am quite proud that today we have a group of top-flight economists from the land-grant colleges in Washington working with us for 3 days trying to develop the basis for an educational program on this 1962 agricultural legislation. We are not interested only in explaining what this legislation is and what it will do for farmers. Some of the real questions deal with what are the economic and social consequences in the short and in the long run of a yes or a no vote. We also have to go further in terms of trying to develop some kind of a budgeting structure so that farmers can budget the program effects based on certain assumptions. We have an excellent opportunity for some joint planning and for paving the way

for this type of work in the future. One of the problems is that much of your work is done in a staff capacity for the Secretary's office, as I believe was indicated here this morning, but we must have much of this type of analysis also in the development of an educational program. Deciding what you can and can't do on an educational program is often difficult.

As Finner suggested, we can devote some time to screening a problem and bringing back from the field a problem for research. Our folks stationed in the regional USDA laboratories, for instance, spend an important part of their time on bringing industry problems back to the laboratory.

Another problem that we face in the application of research is in the area of public policy work. We do much of the educational work on public policy well in advance of the analysis of proposals. We have had very intensive work on farm policy alternatives starting out 2 years ago. We used authorities in the various land-grant colleges to help us develop these alternatives and the consequences. In marketing we are probably more oriented at the industry and farm level and we certainly need a lot more technical coefficients for use in models in helping people solve their problems.

Lastly, we are quite proud of our working relationships with many of you. Again I would like to reiterate that I think we need a closer tie to make economic research more effective. Our interest is in improving economic literacy of people. Current emphasis in our organization is to serve more effectively as the educational arm of the Department. Most of our staff have been oriented to and have been employed by land-grant colleges. Perhaps this is one of the reasons why we have not initiated or taken as much initiative as we should have in working with some of your group. I hope we will take more initiative, and to this end I am dedicated. I do believe that we need to provide some more effective means of working together in order to assure that, where appropriate, organized educational programs are developed to make more effective use of ERS research findings in improving the economic literacy of people and helping them solve problems.

Koffsky:

This is one answer to the question of research for what, and we certainly appreciate, Ray, your taking the time when you must be packing now to leave for a month on a foreign tour.

Harold Abel will now tell us what it means to be out in the States and dealing with people there on ERS research.

Harold Abel, Marketing Economics Division (Colorado):

How to make the product of ERS and State Agricultural Experiment Stations more useful and more meaningful, also more effective, is a big subject to cover in a few minutes. Even with an already good product, which I think we have, a constant effort should be made to do a better research job upon every new project we work on.

Basically, I think what we are talking about and what we are concerned with here is really a better final product for our ultimate consumer. Developing a quality product involves many things. It includes qualified personnel. It includes intensive planning. It includes the right use of methodology. It includes industry cooperation -- to list only a few. One way to look at the problem is to assume that if our final product is good enough, somewhere or another it is going to get into use. This is a big assumption, but if our product is real good, then certainly our chances are much better of getting it into use than it would be if it were mediocre. It does not depend so much on how good you or your colleague thinks the product is, it is how good does your ultimate user think it is. Basically, then, we must strive to have the very best work we can do within the limits of our resources.

To make it good, we need first to do a lot of planning. If we are working with a commodity, like livestock, we should first be thinking in terms of an overall research program rather than a single system of isolated studies. Each research investigation should be considered as a part of an overall integrated field of research for the particular commodity. In this way individual projects or studies should follow in related and logical sequence under a system of priorities and not on the basis of desire of individual researchers assigned to the work.

To do this we need a team approach. One way to handle the planning phase is to have a small committee or a planning group within the research team who will continue working and thinking in terms of the broad research picture and work priorities. As the program moves forward one should not assume that a predetermined course of action is so fixed as to exclude consideration of other projects.

From this then, we get down to the problem of a single project. We don't just inquire in general, we inquire into something, and it is essential to be very clear as to what that something is. I have found that if research gets off on the wrong foot to start with, no amount of good methodology subsequently will get it back on the track or lead to a solution. A failure fully to comprehend the problem will lead to gathering of data that is not needed in the solution or in the failure to obtain data that may be essential or the wrong manipulation of such data as is obtained. Always keep in mind the industry you are

trying to serve and how your results are going to be used. Always find out what the industry people think, even though you may not always agree. Do industry people think the problems you are trying to solve are important or do they just appear important to you?

To summarize, then, a good product requires a lot of planning, a lot of pretesting, and exploring before you take off. Always keep in mind the people you are trying to serve. Be honest with yourself, with them, and let those who are going to use your results in on your study early in the game. They will be better cooperators and they will make it possible for you to obtain certain kinds of information you could not get otherwise. Yes, they might even give you a new idea. Remember that good public relations is part of the research job. Keep industry people on your side -- you may want to come back again, maybe even a second time. Don't conduct your studies with the idea of impressing your colleagues. And don't throw a lot of high-powered tools of analysis into the publications unless it is absolutely necessary. If complex methods are necessary, don't emphasize this phase of your study; screen out the difficult concepts. They are beyond the user's experience and understanding. Give the primary users the results that they need in as simple and as complete fashion as possible. Conduct your research with the idea of getting your results out as fast as possible.

Of course, if we complete a good piece of work and we fail to get it into use, it is like fumbling the ball on the 1-yard line. This, I think, is one point that we need to give a lot of attention to, because I know that quite a few of our researchers feel their work is completed once their bulletin is in print. I think we need to do more work with the Extension Service. We possibly need to bring them into the studies earlier, let them become familiar with our work before it is completed, and keep them up to date. I think also that research workers just have to assume the responsibility of servicing their own product. Most industry people like to hear it right from the horse's mouth. They like to read our bulletins but they also like to hear the man who has done the original work tell them what's in a bulletin. So meet with the industry groups, talk about your research, develop closer relationships with Extension in the early stages of your work, which calls for more and more coordination of our efforts in the field.

Koffsky:

Now I would like to ask Quentin West, Regional Analysis Division, to talk to us about the foreign aspects of this subject.

Quentin M. West, Regional Analysis Division:

Analysis means different things to different people. In FAS we were called Foreign Agricultural Analysis Division. In FAS most of our time was spent in what Clodius would classify as data gathering and reporting and servicing. In fact, research was not a very popular word; it was associated with the ivory tower. It was almost impossible to put a scholarly article in the magazine "Foreign Agriculture." The article did not run if you didn't somewhere say how this was going to influence U.S. agriculture exports in the immediate future. We did effect somewhat of a change while we were FAS. And then our shift to ERS helped accelerate a trend toward more research and less of the servicing type or of only data gathering and reporting. I think we have done much in making our product more useful in really understanding the agricultural situation in foreign countries.

I would like to mention several examples of work we've done in the last year which I think have moved in that direction. The most important is the World Food Budget. That was a difficult piece of work, because we were given 10 days to prepare our first approximation of the world food deficit for some 100 countries. We followed that up by a more detailed analysis and projection of the demand and supply of the key agricultural products and an analysis of the nutritional gap that remained after we took into consideration imports and the part the United States would probably play in filling that gap. As the result of this, the division received the superior service award for this work. The publication has been used not only in the Department of Agriculture but throughout the United States as the only place that all of these world food needs have been brought together into one publication.

Another example is our work on long-term projections. We have studies in several countries throughout the world attempting to project for 5, 10, and 15 years what the import demand will be for agriculture products that the United States exports. Two of these have already been published and four more will be published in the near future. In fact, Wayne Dexter is taking a trip to Israel, leaving Friday, in which he is going to make a contract with an Israeli organization to publish these documents because they are quite extensive documents. I think that this is going to really get us some valuable information on the long-term aspects of the agricultural situation in many key countries throughout the world.

The Common Market is of vital interest to the United States. Over 50 percent of our agricultural trade is going to the European area which may be affected by the Common Market. We are cooperating with many agencies to gather information and make analyses of what is going to happen there. We are putting out in conjunction with the Trade Statistics Branch two volumes of agricultural statistics for the Common Market countries.

Another area of importance is analysis of foreign competition. We have done many generalized studies and are trying now to make them more specific. For example, we completed one on trade and production policies of Australia that will affect competition with the United States. We want now to analyze specific markets like Japan and show how Australia actually competes with us, for example, on wheat. This I think will be a lot more useful to people in the Department of Agriculture and to our exporters.

On how we can improve, one important area is the improvement of data on foreign countries. Unfortunately, we do not have SRS to work for us in gathering data. We have to gather our own data and we've done quite a job of research before we finally get the data together, evaluate it, and come up with a figure which we can use. In fact, many times we can do no better than grab a figure out of the air because there is nothing else available. Much improvement can be made but as I see it now, we still will have to spend a lot of our time in data gathering and reporting. Because there are no data available, we still will continue to put out quite a bit of material which is necessarily descriptive, but I think we can move in the direction of analysis of cause-and-effect relationships to make more valid our projections of the foreign agricultural situation and the effects of these upon U.S. agriculture. To improve the quality we are going to have to cut down on the quantity or add to our resources. We do have a tremendous output of reports. But in order to do this, we'll have to improve our resources. Nate told you that there were nine people on the domestic side for every one on the foreign side. You handle one country; we handle 110 countries. So you can see the depth in which we go is quite a bit different.

The last point -- we need to become more a part of ERS. Part of the last year we felt much like orphans divorced by FAS and not yet adopted by ERS. There has been a lot of improvement. Some of these coordinating committees and study groups have helped. The most important thing that has happened is this conference here. It has given us an opportunity to meet more of the people in ERS and to find out what our mutual problems and our mutual interests are.

Koffsky:

Now I would like to call on Wayne Dexter, and I think we have a surprise for you. We just received an okay from the Budget Bureau that we can inaugurate a new magazine for ERS. Wayne is Director of our Information Division and will tell you about it.

Wayne V. Dexter, Division of Information, MOS:

A research agency has special information problems other kinds of agencies don't have. First, much of our material is so technical that it goes over the heads of many people unless it is specially handled. Furthermore, much of it isn't particularly newsworthy so mass media tend to ignore it. I might add here that I use "newsworthy" in the sense of current news value and not in the sense of intrinsic importance. Another problem is that our material comes out in such a wide variety of forms -- research reports, situation reports, journal articles, speeches -- that it is difficult for users to keep track of it. Associated with this is the fact that our research program is so broad it is hard to keep up with it. I understand we now have about 500 research projects running concurrently.

A fourth problem is that as an originator of basic information the information we produce is used widely, in Government and out, without credit.

A magazine seemed the best answer to these problems and we began planning for one immediately after reorganization. As you remember, reorganization left ERS without a magazine -- Agricultural Marketing stayed with AMS; Foreign Agriculture with FAS; and the Agricultural Situation went to SRS. I want to describe for you, briefly, our plans for the new magazine.

We are planning a 24-page monthly publication with a distribution of 25,000. We are thinking of a news magazine rather than the conventional house organ. The magazine will contain the following departments: Outlook; The Farm; The Market; The Foreign Market; The Consumer; Economic Trends; Checklist; and Special Stories.

Our objective is to cover completely and promptly major developments in Agricultural Economics each month. This includes both research information and current economic reports such as outlook, farm finances, marketing spreads, foreign trade, and farm income. We have arranged for a printing schedule that will allow us to carry timely information. Treatment will be nontechnical or popular.

The magazine will be aimed primarily at opinion leaders in agriculture and in firms and organizations dealing with farmers. The main groups to be reached include: Extension workers and agricultural experiment stations, economists in Government, colleges and business, ASCS committeemen, farm cooperatives, vocational agriculture teachers, farm organizations, trade organizations, marketing and consumer organizations, press, radio and TV.

To sum it up, the main advantages of the magazine are these: First it will make use of our materials more convenient by making them available in one package. Second, ERS will be identified with that package. Finally, I think it provides a useful means of internal communication among the divisions in Washington and between Washington and the field.

## X THE CHALLENGE IN FOREIGN ECONOMICS RESEARCH X

Sherman E. Johnson, Chairman

Johnson:

I am much impressed with the importance of research in foreign economics of agriculture, because of the kind of world that we are living in at the present time. I think that all of us get impressed with the need of knowing more about what is going on in the world, agriculturally and otherwise.

Agricultural exports, of course, are one-fourth of our total exports at the present time. This means that we are making a very considerable contribution to the balance of payments and to foreign aid. It is tremendously important to U.S. farmers because exports take about 17 percent of our farm output, largely in the staple commodities where we have some surplus problems. I know you are all acquainted with this; rice, wheat, and cotton about half, and 30 to 40 percent of the soybeans and tobacco. Now 40 percent of all foreign assistance programs consist of farm products. So, it seems tremendously important that we tie the foreign aspects into our study of the agricultural economy in this country, and give more emphasis to research in foreign economics.

Ideally, we should know as much about the prospect for the export market, exports and imports, and the different outlets that we have in the different countries, as we do about prospects in the domestic markets. Then we would have a picture of what the outlook is for farm products. But that is an ideal that we certainly are not going to achieve very soon. We have more than 100 countries to get information on, and the kind of information that you can get from some of those countries is very sketchy, indeed. With the small resources we have, it becomes even more sketchy. But let me emphasize that the outlook for farm products is not complete without assessment of the foreign market prospects, and that our projections must include the export and import situation as well as the domestic situation.

When you get to P.L. 480 programs, we need to know where the opportunities are and we need to ascertain the opportunity for long-term market development. I think there are some real opportunities to gradually transfer the food aid programs into commercial markets for farm products.

Most certainly we need to study the competitive situation in other countries and compare it with our own situation. How is economic development generated, and what is agriculture's role when you have 60 to 80 percent of the population engaged in agriculture in many of these underdeveloped countries? It is obviously tremendously important to do something about agriculture.

We will hear first from Wilhelm Anderson on Regional Analysis.

Wilhelm Anderson:

The function of the Regional Analysis Division is to do research and analysis on the conditions and factors and developments in 100 countries; in effect, the supply, demand, and trade in farm products including the effects of these conditions and developments on current and future U.S. agricultural exports. We have been working on this in the Department for 32 years. I think this activity began in 1930 in the Bureau of Agricultural Economics. It continued for 9 years as the Foreign Agricultural Service Division. We then had quite a large number of agricultural commissioners who were spread over different parts of the world, mostly in Europe. Then the responsibility was transferred to the State Department and what was the Foreign Agricultural Service Division became the Office of Foreign Agricultural Relations. That continued until 1954. Then Congress saw fit to call on the Secretary of Agriculture again for the responsibility for the work in Agriculture, particularly reporting work. The Foreign Agricultural Service now has 60 offices abroad feeding information to the Department of Agriculture.

In our division of ERS we have no field staff here or abroad. We are organized into six branches, five of which are regional branches. The West European Branch covers 16 countries in Western Europe. This area of the world has for years taken almost half of our agricultural exports.

The Eastern Europe Branch covers the East European satellites and Russia. Dr. Lazar Volin, chief of this branch, is probably the outstanding expert in the Department, if not in the country, on the agriculture of Russia.

The Far East Branch begins with Afghanistan and runs all the way east including mainland China, Japan, and Indonesia, and also includes Australia and New Zealand. This area holds half of the world's population, 1.5 billion people, and has one-fourth of the arable land of the world. Eighty-five percent of all the deficits in food in the world are in this area. Available land per capita is so small that for Communist China it is about four-tenths of an acre; for the rest of the Far East it is eight-tenths of an acre, and for the whole area, probably something like six-tenths of an acre. It is in this area that most of our problems in the food area are centered.

I am going to spend a good deal of time on the Far East. We have been in the foreign economic assistance business now for more than 10 years. We have put \$2 billion in Viet Nam, \$1 billion in Pakistan, almost \$5 billion in Korea, and \$1.4 billion in the

Philippines. I think this is the area of the world we are going to become confronted with increasingly. The difficulty I see is that we are not making much progress. I spent several years in Korea and several years in Japan. We made some progress in Korea, Indonesia, Formosa, Pakistan, Afghanistan, and Iran. I am not sure we could say we have moved these people forward in the sense in which Mr. Kennedy discussed this over a year ago.

Now then I ask, what are the challenges in foreign economic research? I think that it devolves on the Department of Agriculture to provide the kind of information in agriculture to make it possible for the State Department and for AID to accomplish adjustments that they must accomplish in agriculture worldwide if we are to survive. I think we should be equal to the task of providing the Department of State and the AID the kind of information they must have if we are going to make successful the work we have to do in this field.

I think it is going to be exceedingly difficult to move our agricultural exports much above \$5 billion for many years to come. We have cash exports at  $\$3\frac{1}{2}$  billion and our program exports at  $\$1\frac{1}{2}$  billion. I don't think that is where the challenge lies. The great challenge is in how we are going to provide the Administration with information they must have if we are going to move the underdeveloped countries forward over the next 10 years. This is the job ahead of us.

We have been doing research on foreign agriculture long enough and I think we have done enough research to be able to make some significant observations on foreign agriculture. Some of these were discussed in the World Food Budget. It is an analysis of the world situation in food and agriculture, particularly in food. Now, what do we find? We find that 30 countries, that we call the industrialized area of the world, including Europe, the United States, Canada, Japan, Australia, and New Zealand, have a billion people who have a relatively high standard of living, adequate resources, a high state of development, and \$1,000 average per capita income that is growing at the rate of 4 to  $4\frac{1}{2}$  percent a year. Every nation in this group has reasonably adequate diets and no problem of bringing in food it doesn't grow itself. Then you have something over 70 nations that make up the warm-climate part of the world where the per capita income is \$100 for 2 billion people, with exceedingly meager land resources and a growth in population of over 2 percent. What is ahead for these people for the next 40 years? We do not see any great problem in feeding these people through this century. I think we know how to do that. But then there comes the century after. If the growth in population continues at 2 percent or over, and there is no reason to believe that it will come down for many decades to come, you have the more serious problem. We can provide them with bread but not much else, so what does it do for their aspirations for a better life?

You could ask yourself how this came to be, that in the northern industrialized group of nations you came to have a condition where now we have a per capita income for a billion people of \$1,000. I think we know something about the answer. I would say from the study of history that from 750 to 1750 in Europe you had a condition of village agriculture in which you had a stable population of about 140 million people for a thousand years with hardly any changes in the number of people. You had a few cities but the city population was small. Then something happened about 1750 in which the number of children that lived to the age of one year or more began to increase. It started about 1750 and by 1850 you had more than 160 million people, and by 1940 you had 400 million people in Europe.

Now how was this problem met with the increase in population? By the most revolutionary land reform that the world has seen. You don't hear much about it, but the village agriculture of Europe was just torn apart. In the tearing of it, 35 million people from Europe moved to the United States between the years 1800 and 1925. Most of those in this room are descendants of these people. This was important for the people remaining in Europe in achieving what they did. Now this is not possible for the Far Eastern people, nor is it possible for the African people, nor the Latin American people. They must solve their problems where they are. This is why the problem is so difficult to move ahead in economic development in agriculture. You cannot move them from one place to another. That is over with.

Well, I may have painted a dark picture -- perhaps Kenneth Bachman will improve the color of it a little bit. I will add some comments in the question period on the rest of the work of the division.

Johnson:

You have thrown out a challenge and you have certainly thrown it out to the next speaker. We will call on Kenneth Bachman of Development and Trade Analysis.

Kenneth Bachman:

I would like to begin by joining Wilhelm in emphasizing the large size of this job and the small number of people that are involved in it.

I was pleased to note yesterday from Jim Cavin's epic essay on the life and times of O. C. Stine, that the Economic and Statistical Analysis Division also had been formed out of bits and pieces. Our history in the Development and Trade Analysis Division is a little bit shorter but it has certain parallels.

When ERS was born in 1961 it was decided to bring together both the foreign and domestic economics research program. It was decided to leave the commodity analysis over in FAS because it was largely a short-term type of operation and was very closely related to the sales program. The Regional Analysis Division was a functioning unit and it was transferred intact.

In addition there were two branches -- the Trade Statistics and Analysis Branch and the International Monetary Branch -- in the FAS that were thought sufficiently analytical that they should also be in ERS. It was also thought desirable to resume work on foreign economic development research. There had been quite a bit of work going on in this area, particularly during the late 1940's, but with the emphasis on the FAS as a salesman for the American farmer. In addition, such things as land reform had become kind of a bad word in terms of any analysis. In fact, when they began to look for land tenure experts, the Land and Water Branch in the Farm Economics Division of ARS spent quite a bit of time advising the State Department on land problems abroad simply because there was no regular work program underway. In addition, it was felt that there was need for a broad study of our export program, the P.L. 480 programs, and how they fit into domestic programs. Then there was the training and technical consultation of foreign visitors in economics and statistics.

All these different elements were brought together into the Development and Trade Analysis Division of ERS. In the past year we have managed to have a net addition of 25 or so people. The emphasis that Secretary Freeman, Willard Cochrane, and others have put on the Department of Agriculture getting involved in foreign work means that both our foreign divisions are going to have a real challenge and a real opportunity to perform.

The specific challenge in the development and trade area is one of providing the research foundation for better policy decisions on U.S. agricultural trade and economic development programs. Our farm exports in 1961 were \$5 billion. About 60 percent of these exports involved some sort of export assistance, either special Government programs or export subsidies, or both. I think there is a real opportunity to improve the way we are going about this. But the interest does not stop there. P.L. 480, for example, makes up 40 percent of our foreign aid abroad. In India, it makes up 70 percent. One of the first objectives of the act is to make the maximum effective use of surplus commodities in economic development. Economic development is related positively to enlarging foreign trade in farm products, and also in industrial products.

In our division we have four areas of work: export program research, the Economic Development Branch, the Trade Statistics and Analysis Branch, and the International Monetary Branch. We hope to start some work on the impact of interregional agreements on trade, probably focusing on the Common Market in the beginning.

The present focus of the export program research is on comprehensive study of the effects of P.L. 480, Title I, agreements on economic development and trade in foreign countries of the world. We have studies underway now in India, Turkey, Spain, and Colombia, and we finished a pilot undertaking in Israel which is being summarized now. We hope to cover all the principal countries in this area next year, and also to get into some of the other types of programs such as school lunch programs.

A major question is, are development loans paying off and what type of loans would pay off better? This area of work is a particularly big problem and challenge.

Another study is getting together the available information on the relation of various types of input to productivity, fertilizer, extension service, education, and so on in certain countries. There has been practically no research effort in many countries, as far as programs of aid are concerned, it has only been recently that they have suddenly discovered research and as a result in certain countries you had very little progress.

The Trade Statistics and Analysis Branch was transferred into ERS intact. One important part of the work is appraising the export situation, by commodities and by commercial exports versus exports under special Government programs. Closely related is the work of analyzing the impacts of current developments in exports on the export programs. For example, the President's trade bill has generated questions in political circles as to what this is going to do to a given State or congressional district. We spent about 2 months last winter developing, by State and by congressional district, the equivalent of a percent of production that was agricultural export.

We are currently preparing a handbook of Common Market trade and monetary information for the Common Market countries, for the potential Common Market countries and for the overseas territories.

Our major challenge, I think, is to find the time and people for some research studies. What have been the factors, for example, affecting the trade of Common Market countries in the postwar period and what have been the causes of changes of U.S. farm exports? Can we estimate the effects of trade restriction, quantitative and nonquantitative, on agricultural trade? Can we develop some sort of index of protection of agricultural products among countries?

Johnson:

There have been a good many people who have talked about the work in the less developed countries. They are low-income countries, most certainly, and they are trying to get on this

development spiral. They are trying to negotiate the takeoff as Rostow talks about it. In Congress and elsewhere, we find this kind of question: Suppose you help these countries develop their agriculture -- and they are producing cotton or wheat or rice, or any one of our stable crops -- they are going to compete with us better than they ever did before. What is going to happen?

I think, first of all, we need to be impressed with the terrific poverty in these countries. I was visiting with the man who is Secretary of Agriculture in Madras State in India one day and we were driving around the country. He told me about the poverty of some of his people that he grew up with and how the women had one sari, one at a time. And when they washed that sari, they washed half of it at a time down by the tank, and they let that half dry and put it on, and then washed the other half.

One more yard of cloth per person per year in India would be about 300,000 bales of cotton. So why worry about it if you can get the income up. India is trying awfully hard (and they are trying so hard that they are not taking as much of our wheat as I think they should to get up the purchasing power) to increase consumption of cereals, of food grains, in the third 5-year plan, by 3 ounces of food grains per day per person. Three ounces more per day per person in India is about equivalent to 500 million bushels of wheat, or half of the production in this country. The real question here is how to break this vicious circle of ignorance, poverty, disease, and suspicion so that they can increase their income, and, of course, hold their population in check. This is something that some of these countries are working very hard on but it is a long-term problem, and one that is going to be with them and, therefore, with us for quite some time. All right, who has the first question?

Charles Davenport:

Would you comment on data gathering? There has been a lot of mention of this in the conference.

Anderson:

I mentioned yesterday that our divisions do not go out and get timely data. We do not use survey methods, neither do we mail out questionnaires. In the Foreign Agricultural Service there is a major operation known as the World Crop and Livestock Estimates. The data come in from 100 and some embassies. They come from about 60 foreign offices of the Department of Agriculture. The agricultural attaches have a schedule of reports that they must meet currently, week by week, month by month. This information comes in as dispatches. It comes in through the commodity divisions of FAS into the Regional Analysis Division, the Development and Trade Analysis Division, and some other parts of the Department.

We also have access to a lot of other information. It is very necessary for us to have language facilities in the division because the publications of the governments come to us in their language. People in the branches extract from them the information that is needed. We assemble and collect a lot of data but it is data that is originally collected by other agencies. We spend endless time extracting data that comes in from the attaches, from the embassies, from trade groups, and over the years we have been assembling this data, classifying it, codifying it.

We have developed a time series on different crops, acreages, yields and production for 20 years, and it is this operation which has made it possible for us to make projections of supplies for 100 countries. It is not as good as it should be but we are doing our best to improve it. It is pretty good for Europe. It is pretty good for the entire industrialized area of the world. It is good for some other countries, but it isn't good for Africa, Afghanistan, Iran or Iraq or many other countries. FAS is making some funds available to us, local currencies and dollars, so we can go into the countries where the data are inadequate, and we can set up a project with the attaches to go in and work with the Government to pull the data out.

Bachman:

We ought to think about two types of data. One is the overall aggregative type used in the World Food Budget. The other is the data on relationships. I have been intrigued with the possibility of using P.L. 480 and 104(k) grants as one of our basic sources for getting some of this data. I might draw on a couple of illustrations. One college in India has done a small study of about 30 or 40 families, following the Bolin-Beale type: Who adopts technology? Under what conditions? When? And what are their income and financial levels? Another one is in Pakistan where we discussed the operation of land tenure -- what changes in tenure arrangements have occurred, and what are the associated agricultural productivity levels? Here we would need rather carefully selected areas and farms in these different situations.

Discussion

R. L. Tontz, Development and Trade Analysis Division:

There is little distinction between our data sources. We do rely on the Bureau of Census for our official U.S. trade data and we are not data compilers; we are, in effect, data users. But we do have them compile this information in special form. They take the original export declarations and the original import withdrawals and from this they prepare statistical summaries, classifying

U.S. agricultural exports and U.S. agricultural imports for all the countries of the world to whom we export, and all the countries from whom we import. This material at present is prepared on ADP equipment at the Bureau of the Census on Univac. We are considering shifting this process to the Department of Agriculture.

Southern:

Sherman, this applies to a statement you made relative to the 300,000 bales of cotton in India. Would you care to comment on the difference that it would make in India if they used this extra 300,000 bales of cotton to give the women another yard of cloth or if they used it to get foreign exchange for their economic development?

Johnson:

We are sending them cotton under P.L. 480 to use in their own country, and this provides employment both for handicraft and small-scale industry. Foreign exchange is very scarce. We are not only sending cotton, but we are sending, of course, wheat and feed grains, as well as some other products. I feel quite optimistic about India, perhaps more so than other countries. You can see real progress in India over the years even though the situation is still tough. But if they get sufficient increase in income, purchasing power is going to rise and they do have sufficient resources so that resources of other kinds than agriculture are going to supply the foreign exchange that they need. I think they are going to continue to be customers for agricultural products from this country, because of the rapid increase in population.

Quentin West:

On Dixie's question, India makes quite a point that they are trying to achieve economic development through democratic means. Now they have a near neighbor that has tried it in a different direction. China has been able to achieve a higher level of forced savings and to invest more in economic development. In 1958, it appeared that mainland China had, in spite of depriving their people, achieved a lot more rapid progress than India. I think the situation does not look so favorable to China now, because they did have an unbalanced plan of investment, sacrificing agriculture for some unwise industrial development.

H. L. Stewart:

One cannot help being impressed by the size of the challenge, the size of the job and the importance of the job, particularly when you think in terms of the amount of resources that you have

available for the job. So I would like to hear a comment or two on what part you visualize the rest of ERS may have in meeting this challenge -- other than as a source of recruitment.

Johnson:

I would say that especially on the 104(k) foreign currency funds, you other divisions have a real interest. As a matter of fact the projects that are going at the present time were stimulated by the other divisions, Farm Economics, Marketing Economics, and Economic and Statistical Analysis, in Israel. We have been designated as a channel through which all of the foreign problems are routed. I think there are real opportunities, especially in foreign currency research under 104(k) to get some really good work going in the countries that have capable people, and where the foreign currencies are available that will tie into the kinds of problems that we are struggling with in this country. In other words, I think from now on we've got to think of the world, then of the problems in this country in relation to the world.

I think one of the real questions here, of course, is that when we start this work we have got to find ways of supervising it, because otherwise it is not going to be very productive.

Bachman:

One thing that occurs to me is the farm export programs and how they relate to the domestic programs. Neither of us can handle this alone. We ought to think about some cooperative work in this area.

Anderson:

My concept was not just ERS but the Department of Agriculture. It seems to me that what we need to consider is for the Department of Agriculture to undertake to implement a program of agricultural development in specific countries -- that is, ARS, FS, SCS, ERS, and FAS, altogether, to take on the problem of putting a country on its feet. We can draw on the colleges and universities. This is what Secretary Freeman wants us to do.

Johnson:

But of course this is the question of organization and agreement between AID and Agriculture, and I do not know which direction the agreement is going to go. The Secretary has indicated publicly

that he is appointing an Assistant Secretary for foreign agricultural work, and I suspect that some of these agreements with AID and arrangements to handle some of this work are probably awaiting that appointment.

Winn Finner:

It seems to me that we have a growing body of groups that are concerned with international agricultural development in foreign countries. Our own programs, AID, not only through itself but through colleges, the U.N. special funds, subsidiary organizations, Colombo Plan, World Bank, and I am sure there are two or three times as many. Now, is there any prospect or possibility that in total we could have a more effective program if there were less fragmentation, if efforts were channeled through perhaps only two or three organizations.

Johnson:

I think that question almost answers itself. I am not sure that it does, Winn, because sometimes perhaps competition is a good thing, but it is almost impossible, of course, to visualize the channeling of all of our aid program, for example, in foreign countries through an international organization. Now I say it is impossible, but largely because I don't think the appropriation would be in the magnitude it has been made if it were going in that direction and if we were sharing all of the responsibilities of the AID program in that way. That's one man's opinion.

Bachman:

AID is interested primarily in operating and in surveys. Let's go out of this country for 2 or 3 months and find out what's wrong and recommend an action program. It is also true of the International Bank and a good many other agencies. I think if we did get called on by AID we might take over this research function, possibly along the way Wilhelm was suggesting. I don't see how in the small foreign divisions we can have the talents that are required for operating a program of that sort by ourselves. I think that we have to make some arrangements where we could borrow people from time to time.

Charlie Kiefer:

In the event the master agreement with AID comes to pass and in the event these research responsibilities to which you three gentlemen have referred this morning devolves on ERS in the foreign

area, do you not believe that it is going to take the very best talent in ERS to man these research obligations abroad?

Johnson:

There's no question about it. I would say this without hesitation, that if that kind of responsibility were placed on us we are not as of today equipped to handle it and it would take our very best efforts.

Lazar Volin:

I entirely agree with Sherman about the importance and necessity of world outlook in our work. As a matter of fact the old BAE had it during the interwar period. This was reflected in the type of studies which were undertaken.

I would like to take one minute to refer to another matter, a question of data. Vice President Clodius chided us for spending perhaps too much time in gathering data. Well, gathering data as far as foreign agricultural production, particularly, is concerned is not just a matter of extracting figures from publications of foreign governments or of trade sources. A great deal of effort goes into analyzing and sifting through these figures. Unlike the FAO, at least until recently, we do not always accept the figures which the foreign governments publish. The classical case is that of the Soviet Union. For many years the Soviet Union published figures of production which seemed to us grossly overestimated and we scaled them unmercifully, almost one-third, and many people, especially in the academic community, thought that we were crazy. Well, after a period the Soviet Union reissued their figures and they showed in some cases even greater adjustments than we had made and in many cases our figures almost coincide. Maybe they accepted our figures. The same thing happens with many other countries. You cannot always explain why you do not accept the figures but after a while when you work with them for a period of time a certain amount of judgment develops among those people.

Louis Ducoff:

Dr. Johnson referred to Rostow and his analysis of the stages of economic growth, particularly with respect to the necessary preconditions for takeoff from what he considers traditional agrarian society to a modern economy. That is what we are talking about when we talk about the underdeveloped countries of the Far East. Now, my question relates to the combination of forces and factors that Rostow mentions. He groups them under three groups, first, the development of agriculture to a more productive level;

second, the social overhead, capital investment; and third, a group of sociological and noneconomic factors in the social structures, including the values and attitudes and motivations of the people themselves. Our discussion has focused on what we can do with respect to a contribution to a better agricultural technology. My question is, what is it that we can do to help these countries and to influence these countries to help themselves? What can we do to bring to bear these other components that so vitally affect the takeoff or what Rostow calls the compound interest growth principle?

Johnson:

That is a real subject for research. Obviously, the operations programs are going to have to go on, and much can be done by synthesizing and putting together the available information, country by country, as a basis for a program. One thing that we in this country must guard against is to go to these countries, which do not have the educational system that we have in this country, and try to organize an extension service of the American type. I have seen a good many frustrated American extension workers in some of these countries, because extension of the American type is not going to do the job. We forget that around the extension service and the land-grant colleges in this country are the other various agencies of the Department of Agriculture and private trades that have developed resources of various types, and credit institutions, marketing institutions, etc. We need to go to these countries with an open mind to try to discover and ferret out the main problems, and it isn't going to be done rapidly. I think AID is going to have to become convinced and we are going to have to become convinced that we had better try to do this on a pilot basis, country by country, and learn first how the vicious circle can be broken.

~~X~~ MANAGEMENT AND OPERATIONS ~~X~~C. F. Kiefer, ChairmanKiefer:

It is a real pleasure for me to be associated with all of you. In a very real sense this association with you folks dates back many years. I am not unmindful daily of my obligations in return for so much of what all of you, in these various capacities, have done for me personally.

We in this organization, in ERS and MOS particularly, work together, quietly we hope, to help you fulfill not only yourselves but also your work programs.

I am going to leave it to my colleagues to introduce the members of their staff in MOS who may be present. I do want to pay passing reference -- more than passing reference -- to two men who are here who work in the two domestic divisions in the general management area. I am not sure they are present in the room; if they are I would like them to rise -- Don Beckler and Paul Kulp. These are the folks who do the downfield blocking for you folks with the MOS divisions.

I have only two general areas of comments; first, has to do with the caliber of people in MOS key positions. In my judgment they are strong, professionally oriented as you are; and I feel you and we and they get together very well. We are not the tail that wags the dog, as it used to be in the old days in BAE. Yet, we are and have been able to help you the most when we have been in full and timely participation with you in the dialogues that you conduct about your daily programs.

Now we are indeed appreciative to all the key staff of ERS and to Nate Koffsky for the various ways in which we have been used during the past year. We have sent each of your field people, the heads of your offices, our work plans for each of the four divisions in MOS. I shall not repeat them here. We take that stuff seriously; and we, by sending those plans out to you or your chief, have intended to keep you informed of what we are doing. We have appreciated the letters you have written us. My colleagues will speak to their respective areas of responsibility.

Now, what are the main overriding concerns of ERS and MOS from a purely managerial standpoint? I think I can best illustrate this by reference to the results of a self-survey which was made by the Bureau of the State Services of the Department of Health, Education, and Welfare. This is part of the Public Health Service.

Perhaps you have heard some rumblings which have appeared in the press with respect to the attitude of the professional staff in that agency. There has been recently released on a somewhat restricted basis the results of an attitude survey of research scientific workers in that agency. Not that there is comparability or similarity between the types of research mind which exist there and here; but, nevertheless, perhaps you will have a certain sense of lofty appreciation of what some of your colleagues in the other sciences have to say about the factors contributing to job satisfaction. In 1956 this survey was taken and it was again taken in identically the same way in 1961 of some 20,000 professional workers. Let me read them to you. You know that yesterday we were talking about recruiting, training and retraining professional personnel, and I am going to read these 15 items and the ranking that these professional men and women gave of job satisfaction factors. Here they are:

1. Interest potential of work
2. Integrity of management
3. Opportunity to move up in the organization
4. Caliber of supervision
5. Opportunity to discover and do creative work
6. Professional recognition
7. Chance to contribute to scientific knowledge
8. Chance to feel a part of the organization
9. Social value of work
10. Learning what makes things go
11. Security of employment
12. Living conditions
13. Pay
14. Physical facilities for research
15. Congeniality of associates

There were some significant changes in degree perhaps between 1956 and 1961, but I thought you might appreciate having the experience of another universe in the research area. This may have some perspective for you and for your reflection about this conference and about your happy and pleasant prospective association in the best economic research organization in the world.

Wayne V. Dexter, Division of Information, MOS:

I want to devote my portion of this session to telling you a little about the work of our division. I am particularly interested in doing so because of the field people here. We don't often get a chance to visit with you about mutual problems. In thinking about what I might say, I decided that maybe it would be best to present a kind of case study which involves in one way or another every aspect of the work of our division.

The project starts with this publication, "Farm Retail Spreads for Food Products." This is a typical output of our research effort. It has a total of 155 pages, including 30 on methodology, a statistical appendix of 44 pages and a bibliography of 35 pages. This report covers the field and is invaluable as a source book. But I doubt that anyone has sat down and read it through completely except the author, editor, and reviewers. This publication had a distribution of approximately 9,000 copies, more than most research reports but far short of a mass audience.

One of the things that this publication shows is that food prices have risen relatively less than prices of other goods and services, particularly services over the last decade. It also shows that food costs have risen relatively less than income. These are facts that seemed to us to be in the interest of agriculture to bring to the attention of the public generally. They also are facts that would interest the public if properly dramatized.

Our first step was to prepare the leaflet "Food Costs" which had a couple of predecessors under different titles. This has 16 pages, uses color, and is liberally illustrated. It had fairly wide distribution but still it fell short of reaching a mass audience. This booklet still requires considerable economic sophistication on the part of readers to understand it.

The fact that food costs have risen relatively less than other products and income suggests that "food is a bargain." We used this theme in preparing the booklet "Food is a Bargain." We used color and cartoon techniques, and overall it came out as a rather attractive publication. We printed about 100,000. Nearly all of them have been distributed and we have been quite pleased with the reception.

While 100,000 copies is a fairly large printing, it reaches only a fraction of 1 percent of our population. To reach large numbers of people we must somehow get our material into the mass media. Our first step, of course, was to prepare a press release which had a distribution of 600 here in Washington. Then we wrote a story for inclusion in the Food and Home Notes. This is a weekly publication prepared by the Office of Information which goes to about 11,000 people; mostly food editors of daily newspapers, TV, radio stations, food consumer groups, extension groups, and the like.

Next we prepared a TV packet consisting of a script and stills. The camera focuses on the stills while the announcer reads the script. We used the same "Food is a Bargain" theme that we used in the booklet, and also the same art. This packet was distributed to about 250 TV stations around the country. Next, we used the

"Food is a Bargain" theme in the Department's new exhibit, The Meat Miracle, which has been very favorably received around the country. A panel of this exhibit was devoted to the idea that we get more meat for labor than we did years ago, and, also, more than other countries around the world.

The Secretary's office became interested in the "Food is a Bargain" theme so they prepared a leaflet on this subject which has been used to stuff in the bags of groceries as people pass through the checkout counters in the stores. The Secretary himself went to a supermarket, talked to housewives as they came through the checkout counters, and then placed these leaflets in their grocery bags; 1,600,000 went out in this way. We also prepared radio tapes which went out through the Department's Radio Service, which reached several hundred stations throughout the country. We converted the artwork of Food is a Bargain to slide series which was offered for sale; so far about 100 have been purchased.

The ASCS people also have prepared a slide series on this subject which they have sent to district committeemen throughout the country with the recommendation that they use it before groups as much as possible. The Extension Service, in practically every State that we know about, prepared press releases and other themes on Food is a Bargain. We wrote an article on Food is a Bargain for Agricultural Marketing, which has a circulation of 14,000.

Nongovernment groups also became interested in promoting this idea. I have here a pamphlet prepared by the Grocery Manufacturers of America called "Your Grocery Dollar" which is devoted to this theme. Publication was announced by a press release by GMA.

I have here a full-page advertisement in color which was reproduced by dairy and food producer groups in Ohio. A number of newspapers have written articles on the theme that Food is a Bargain. I will not attempt to show you all these for time is getting short.

Throughout this report I have talked about "we" in connection with the preparation of these materials. I want to emphasize that "we" does not mean the Information Division alone. Ted Crane in our division took the lead in this but Ken Ogren and Bob Olson of the Marketing Economics Division took great interest in this project. They not only kept us on the track as far as technical matters were concerned, but they supplied ideas and were sympathetic to the requirements of a popular information effort.

This is, of course, not a typical effort of ERS, nor a typical effort of the Division of Information. Obviously, much of the research we produce is not adaptable to this kind of treatment. But when we do have information suitable for distribution to a large audience I think we should make a sustained effort to get it out,

using all media and preparing materials specifically for each media. If we do this on a selective basis, I am confident that we can reach large numbers of people with ERS information. I think this is not only a service to the public but helps ERS by identifying its work in the public eye. I do wish that when we do undertake such an effort we won't be afraid of imagination and novelty.

Kiefer:

The next man in the array this morning is John Kaminski.

John J. Kaminski, Division of Budget and Finance, MOS:

The Division of Budget and Finance appreciates the opportunity to participate in this conference. It is my hope that the knowledge obtained at this conference may be evidenced in the budget and fiscal services we attempt to render.

My purpose this morning is not to dwell on the operations of the division, but to solicit your help in one of the more difficult phases of our activity. Of our assigned responsibilities, the best known are the payments of salaries and the reimbursement of travel costs.

As you know, the Division of Budget and Finance is acutely concerned with budgeting and, at this time, with zero-based budgeting. When the Bureau of the Budget issued instructions on the zero-based budget, the issuance stated, "Our programs will be reviewed from the ground up and not merely in terms of changes proposed for the budget year. This approach requires a tough-minded objective and realistic appraisal of our work. What is it? What should it be? What is the minimum financing required?

However, even more important than these items is, "How should we present our budget to the Congress?" In considering this phase of the operation we must recognize that the Chairman of the House Subcommittee on Appropriations, Mr. Whitten, is a lawyer and district attorney by background; Mr. Natcher is a lawyer and practicing attorney; Mr. Santangelo is a member of the bar; and Mr. Slack is in the contracting business. Among the Republicans H. C. Anderson is a farmer; Mr. Horan is a fruit grower; and Mr. Michel majored in business administration. The makeup of the Senate Committee, if stated, would be very similar. Which of these gentlemen then has an appreciation for economics?

You may have read the hearings on the 1963 budget request. Mr. Whitten stated in the opening remarks that "the members of this committee can appreciate the value and the necessity of facts and figures, statistics, economic factors, and the various and

sundry information" developed by the ERS. He further stated, "I don't know of any job that is harder than selling the terms 'economic' or 'economist' to the Congress." At this point he offered ERS an opportunity to set forth in the record the accomplishments of economics -- their value, their uses, their needs, and their status as well as any other factors that would impress the members of the Congress. This reaction from the House should awaken us to the fact that we are faced with a major job in presenting and selling ERS.

We have been told that the Executive Branch will support economic research. Therefore, if we can convince the other side of the Government, the Legislative Branch, we will have accomplished our task. This task can be accomplished by:

1. Educating the public.
2. Giving ERS more publicity.
3. Making available examples accompanied by explanations covering progress, accomplishments, usage, and similar data.
4. It has been said that data are going out for which ERS was receiving no credit. Such practices should be curtailed and eliminated.
5. Using charts at the budget hearings -- although these may be repetitive as they were used by Dr. Cochrane in his presentation on the economic situation.

Dr. Clodius in his talk emphasized the need for vitality. Vitality is also a necessary ingredient in budget presentations. The doctor described farm economics and marketing economics as giants -- competent giants. How though do we depict such competency in the budget? The doctor classified regional analysis and development of integrated analysis as progressive. Again, how does the budget reflect this? In order to convey these ideas -- the ideas of a competent giant and of a progressive organization -- our budget presentations should be permeated with lively examples of economic accomplishments. Charts and other visual aids should be made a part of the budget presentation.

In the area of Automatic Data Processing, the computer can supply the final numbers or conclusions, but the vitality, the life or meaning of these data, can only be animated by you, the experts -- the initiators of these presentations. The budget analyst can organize the presentation within established ground rules. The budget analyst may look to the machines for mechanical data but must look to the program people for the description or portrayal. Workload studies and similar approaches may also be effective.

Ideas for study and use are needed. We are faced with a challenge which is of great importance to each and every one of us. It requires a team approach and a combination of all our suggestions and ideas. We in DBF stand ready and willing to participate in this

task. We beg you to submit your ideas and suggestions to us so that we can eventually put them into the presentation. If you have any thoughts that can be used in the presentation, please forward them to Charles Kiefer or me, and they will be given real consideration.

Kiefer:

It is now my pleasure to present to you Stan Dorick.

Stanley J. Dorick, Division of Administrative Services, MOS:

I want to tell you about the work of the Division of Administrative Services. We provide the office space, equipment, and supplies for the employees of ERS, SRS, and MOS, in a manner for the employees to do better jobs. Our division is organized along two lines: Procurement and Property Branch, and Records and Communication Branch.

The Procurement and Property Branch deals directly with commercial enterprises and the General Services Administration. We are interested in devising a system of supplies and equipment that will relieve program people to the extent possible of detail necessary to get supplies and equipment.

We are in the process of improving the inventory that is taken on December 31. We are going to provide an IBM run of the property in your station so that you merely have to check off the item and return it. Of course, we will have to check on machines which carry a number. We are going one step further and that is called a Composite System. Earl Houseman of SRS is working with us on this.

For most of you in the field who are located in land-grant colleges, etc., we are trying to come up with better space -- in universities and GSA. We are striving to have 110 square feet of space per employee.

In Records and Communication we have a very heavy load of mail (letters, memos). We are presently working in MED in developing some record system in Washington which will extend to the field so that we will have a system for records, acquisitions, and record disposals. Disposals of records have to be approved by the Congress.

In the matter of Administrative Issuances, when MOS was created we adopted an interim system of AMS procedures. We have been working for some time now on developing an AI system. These will go to all field offices which will have the latest instructions.

Last, but not least, we encourage field people to write to us on any of these matters. We do have travel money and capable people to do this.

Kiefer:

Our last speaker on this panel this morning is Joe Findlay.

Joseph P. Findlay, Division of Personnel, MOS:

I should like to say first, in regard to the relative rank of pay in the HEW motivation survey, that pay came out about the same way in a USDA employee poll. Many of the factors of interest and concern to employees in the poll, which reached over 6,000 employees generally indicated that many other factors took precedence over the pay issue. I would like to reserve the pay issue until the last of three discussion areas.

I want to touch upon the recruitment situation and some of the comments I have heard here with respect to competition among divisions. I'm sure we don't need competition among divisions in the destructive sense. However, competition may be useful in the constructive sense of informing candidates about agencywide employment opportunities. I would hope that, as we have passed through this experimental effort of joint recruitment with you, we can establish the program as an organized effort through the designation of effective field recruitment representatives.

You are at the campus level where you can make valuable contribution in staffing on a quality basis. We in the Division of Personnel think there is considerable merit in sharing this responsibility, not to load you further, but because you are professional people and you are definitely interested in the input of competent personnel into the organization. They may rise with the organization under your leadership and meet the many challenges that you have before you here both in the domestic area as well as the international area of economic research. You know the candidates. You know their qualities, you know those that are deficient, and you know those that are outstanding.

While we may not accomplish all of the quality recruitment we set out to do, because of certain inhibitions which may exist in the pay area, over a period of time I am sure even this will be rectified.

As I see the designation of field recruitment representatives and their place in this interdivisional enthusiasm for a particular candidate, I think the designated representatives should know when two or more divisions are involved or interested in the same

individual candidate. Although there is some carryover of the former field recruitment representative at the Department level -- such as from the ARS organization in the case of FED -- we need to develop, with all of the divisions, systematic representation to overcome present problems.

Next, I want to comment on training. I mentioned yesterday that we spent some 10,000 man-hours in training participation. Much of this is what you would expect to see in a professional organization in the area of professional development. In a way, we have an oversupply of training opportunities. Our attitude in the training area is to provide through channels all the material and announcements that are made available from internal or external sources which would appear to have merit and value in your professional growth and development. Sometimes, I am concerned and I know Mr. Koffsky is, too, from the standpoint of how selective we are in the programs in which we engage. I am sure that in many of them we apply very good judgment and evaluation, in others I am not so sure.

As you review these training materials and opportunities and as you engage in some of these training programs, your evaluation is of great importance to us and to the Administrator. The results, the value, and the effectiveness of the programs need to be judged by the individual who has participated and a responsible supervisory official, if our training plans are to represent full benefits and results.

In the professional area of development these are only a few of the training programs in which we've had specific participation: Labor statistics, food merchandising, marketing research, American University; conference on merger and acquisitions, Northwestern University; mathematics for economists, data processing, introduction to operations research, USDA Graduate School; resource use planning, University of Michigan; economic theory and marketing statistics courses, University of Minnesota.

Other specialized programs have included: Executive development, University of Chicago; foreign language training and regional analysis courses, Foreign Service Institute; Institute for Career Science Executives, Civil Service Commission; an ERS-ADP seminar with 55 participants, and the reading improvement program, USDA Graduate School, which drew 39 participants.

Now, some comments on our incentive awards effort. I don't know what your individual attitudes are in this area but there may be a somewhat common attitude among research people that "this is not for us." There has been some participation in this area, but it's localized, largely, to two of the five divisions. We believe the incentive awards program is one that can and should receive more emphasis and attention in the future.

Let's move on to the pay area. The President's pay plan is based upon a concept of having Federal salaries competitive with industry. This is a new and significant feature although not the only one. It is not immediately responsive to changes in industry pay, since it is based upon systematic annual surveys of the Bureau of Labor Statistics which will be used to recommend pay adjustments to Congress. The adjustments which you've read about for installation during a period of three years, beginning January 1, 1963, are to a large extent, concession to cost. I have seen figures on the first six months alone, of costs estimated at \$225 million for the Government as a whole, if the plan were put into effect on that date. The Department's estimate of its cost of the plan would run about \$22 million for the first year of the three-year period. Nonetheless, Department representatives have testified recently before the House Post Office and Civil Service Committee and have strongly and urgently endorsed Congressional enactment of such legislation.

We now pass on to the research position evaluation plan. It had its origin in the Agricultural Research Service at a time when the Farm Economics Division was in that agency. The Civil Service Commission framework for application of the plan specifically embraces only biological and physical science research areas, engineering, and medical psychological research and does not by reference include social science research. Its extension after reorganization to the total economic research organization raised some questions requiring negotiation with the Department and the Commission that the plan could be applied with validity to individual research and research leader positions in the economic research area. The plan itself is unique in that three basic components are considered in the evaluation of such positions: (1) the nature of the research assignment; (2) the nature of attributes and accomplishments of the individual; and (3) the reflection of the composite of both of these elements in the actual dimensions of the position.

Because of the questions of application to be overcome in extension of the plan to ERS, screening criteria were developed to provide guidance in determining the kind of research assignments to which the evaluation technique could be appropriately applied. We cannot take time now to definitely describe the content of each criterion, but can give you some idea of the substance of each:

Criterion No. 1, Recognition and Definition of Research Problems: Recognition of the stated problem is frequently only symptomatic of a broader and more basic problem. The problem as stated may not be the relevant research problem which must be identified and defined. Evaluation in depth of available source materials may be needed as it relates to the research problem and includes other research studies, value judgments of industry, farm groups, consumer groups, the public and the Congress. There are others.

Criterion No. 2, Determination of Research Approach: Determination of relevant theory and methodology or lack thereof. Improvisation of new theory or adaptation of existing theory. Formulation of research hypothesis. Development of a plan of research work to be undertaken including sample design or other research basis for analysis of data.

Criterion No. 3, Collection and Analysis of Data: Determining facts and data needed to complete the research. Determining method of data collection and probable reliability. Collect, analyze, and tabulate data, and test hypotheses.

Criterion No. 4, Evaluation and Interpretation: Specify answers to relevant research questions through relationships of quantitative or qualitative results in supporting or denying hypotheses. Interpret application and validity of answers to questions raised by the research problem. Develop interpretations for significant use by industry, farm groups, consumers, the public, the Congress, or by the policy maker in implementing or changing policy.

~~X~~ OUTLOOK AND SITUATION BOARD ACTIVITIES ~~X~~

Nathan M. Koffsky, Chairman

Koffsky:

Attached to the Office of the Administrator is the Chairman of the Outlook and Situation Board. This office has been occupied since its inception by Dr. Bushrod W. Allin and, since this year he is our Distinguished Service Awardee, we made the title something like this: Outlook and Situation Board Activities and General Commentary. This is the only place where this appears. Bush, you can start now and end up wherever you want to.

Bushrod W. Allin, Chairman, Outlook and Situation Board:

The Outlook and Situation Board's function is to make the last review of a situation report before it goes to the printer. Henry C. Taylor started Outlook work. An interesting thing about the history of Outlook work is that the man who founded it is still living on the banks of the Potomac, at Indian-Queen-on-the-Potomac. Every time I see him he expresses great satisfaction that one idea he had when he was head of the BAE has kept alive. He had an idea about what Outlook work was going to do. The idea was that BAE, as he created it, would provide information to operating farmers -- economic information that would enable them as individuals to make production adjustments in the light of the real situation and outlook. For this purpose, he brought together into one organization crop and livestock estimates, market news, and the office of farm management. What are we doing these many years later? We are producing about 100 situation reports a year in addition to the crop and livestock reports. The price report, the crop and livestock reports, and the situation reports are all scheduled a year in advance.

How did the Outlook and Situation Board get set up? It grew out of the experience of the previous organization. You will remember that Mr. Tolley was Chief of the BAE when the Board was created. He had some questions in his mind as to whether this series of reports we call situation reports were really wanted. Was anybody making use of them? He ordered a survey. We sampled a mailing list and sent out a letter to that sample to check up on what the public thought about these reports. The replies were universally favorable. But I am beginning to wonder if we don't have some problems in this area. Perhaps we ought to circularize a mailing list again. We recently made a survey of the mailing list and tried to find out who was receiving these reports. -We found out that most of them are going to professional economists

and statisticians -- not to farmers. Oris Wells always stressed the point that these situation reports are prepared for technicians. This means that somebody has to do some translating and interpreting; the kind of job that Wayne Dexter was talking about here this morning -- to get across what they say. Each of these situation reports is produced by an economist. We look upon them as an attempt to go a little further in interpreting the meaning of data than we do in our crop and livestock or price reports. Taylor recognized that problem when he brought the State extension economists into the Outlook activity.

I have a conception of the role of the Outlook and Situation Board as one phase of a whole complex of activities that go on in the Department; not only in ERS and SRS, but in all of our operating agencies. Data are being produced by all our operating agencies that need to be taken into account by any situation report writer who tries to get the full meaning of his analysis across to even the technician. I see it as one phase of what I interpret to be the Federal-State Farm Economic Intelligence Service. The men who produce the situation reports, in my opinion, should be the best informed men the Department can find.

We should have a crew of experts on the various commodities and for the Demand and Price Situation that can accomplish what I call the main function of the whole service -- economic education. Now you can't do the best job if the rate of turnover in personnel is too great -- even though one of our functions is to train experts. About the time we get one trained to do his job, somebody comes along in some other agency and says that guy knows this field pretty well; so they offer two grades higher, and away he goes.

Now, let me tell you briefly about the organization of the Outlook and Situation Board. There are about 150 different people on about 20 different panels who come to the board meetings. They are responsible experts capable of making an economic analysis of the activities of the agency they represent.

Most of the reports are written in the Division of Economic and Statistical Analysis. They are written by economists. The people that come to the board meeting to help review these reports before they go to the public are from agencies of the Department that have both an interest in and ability to understand and interpret the data that are brought together by the situation report writer. The panels consist of anywhere from six to a dozen members.

Each of the situation report writers is a research man. In that capacity he does the kind of thing that Will Simmons did recently in his publication entitled "An Economic Analysis of the Potato Industry." It is an excellent document. He presented it before the Economics Club not long ago. It's the kind of analysis --

the kind of material -- that every situation report writer should have back of him to guide him in interpreting month-to-month and season-to-season changes. He should give the reason for a stated fact. And some of those reasons come from the operations of our programs. The man who writes a situation report should know enough about the subject to produce the kind of document that Will Simmons produced.

There is a growing interest in long-term trends. We call them projections. I think we are going to have to do more of that.

Some of the most effective Outlook work that has been done with farmers has been done in connection with our livestock reports by Carroll Bottum of Indiana and Francis Kutish of Iowa. Our Outlook Conference, which is a conference with the Extension Service primarily, is simply one item in the year's work. It is for educational purposes. Now who do we educate? Who are the extension economists educating? We give them what we produce nationally. Should we try with the Extension Service to put more emphasis on the farm management aspects of the Outlook work; try to tell farmers more precisely what they ought to do? Sherman Johnson always said that when you have a program, a Government program, you had better have one that the farmer can act on, and he can't act on it the way you want him to unless you make it profitable for him, that is, make it profitable for him to take the advice. We call it adjustment.

We have never been able to prove the point, but it has been raised ever since Outlook work began. If you are effective in teaching the farmer what to do in the light of the outlook, your forecast itself could turn out to be wrong. But that is the kind of wrong forecast we want to make.

I want to stress one more point. The main value of this service is in its situation analysis, not the specific forecasts that we make. To the extent that we make forecasts, we are exercising a great privilege and a great responsibility, for we can mislead people as well as lead them right if they pay any attention to us. Other people who are paying attention to these materials don't think of them as the outlook service at all. They are the policy makers, administrators, congressmen and the trade. The Farm Economic Intelligence Service is a continuing process.

X INTERDISCIPLINARY RELATIONSHIPS BETWEEN ECONOMICS  
AND OTHER SOCIAL SCIENCES X

Robert M. Walsh, Chairman

Walsh:

Yesterday, we had quite a few discussions on the subject of different disciplines relating to economics; today, we are going to discuss that a little more specifically. We are going to discuss philosophy, and we are going to discuss political science and history, and we are going to discuss demography and sociology, and we are going to discuss econometrics.

Our first speaker is our official historian. He has a farm background, having grown up on a ranch in Montana. He attended teachers college in Billings and taught in a rural school. He received a bachelor's degree from Montana State University in 1937, before coming to USDA. He attended school part time and received a Ph.D. from George Washington University in 1950. He is author of a number of bulletins and articles on agricultural history and a book of Readings in the History of American Agriculture. He is now completing the Centennial History of the USDA. He teaches in the USDA Graduate School and at American University. He is active on graduate school committees at George Washington University and at the University of Maryland. He is executive secretary of the Agricultural History Society. To speak on political science and history is Wayne D. Rasmussen.

Political Science and History

Wayne D. Rasmussen, Economic and Statistical Analysis Division:

People have talked about economic forecasting. Looking back a little bit, we had a question come into our history office about a year ago. A gentleman in North Carolina is doing a very extensive economic analysis of gross national income in the United States. He has been using all the material that you economists have worked up. He came to me with a problem. He had been going back into the economic analyses that appeared in the 1921 to 1925 yearbooks. I expect you are all familiar with those articles that combine history and economic analysis. This is one of the first examples of the dot map. He came and said, "By any chance have you any of those old working papers from those days?"

I said, "No, of course not. You know how economists are. As soon as they have a thing down in a table they tear up those working papers for fear somebody may figure out how they did it."

And my friend said, "Can you find out how these people back in 1922, I believe it was, located cotton growing in the United States on these dot maps by States and by counties for 1800, for 1820, and for 1840? The censuses just don't give us that information."

So I thought this was a project for real deep research. When O. C. Stine came in to see me, as he does about every 2 or 3 months, I posed the problem to him.

He said, "Why, yes, I can tell you just exactly how we did that. We had the total cotton production for the United States for 1800, 1820, and 1840. And then I looked at a map of the United States and I kind of figured just where those dots ought to go and that's where I put 'em."

My friend thought that was probably just as good a way as any, and he would just keep on using those same maps.

In the Department of Agriculture our agricultural history work is divided into three duties. First of all, historical work started out as a supplement to economic activity. O. C. Stine was first brought into the Department as an agricultural historian. But under the pressure of the work, the historical work became rather secondary to economics work until Edwards was brought into the Department. Edwards turned the work into a professional agricultural history research center. Edwards was devoted to agricultural history as a science, as a discipline, and he did a great deal to establish it as a separate field.

Today, we have a unique tool for professional historical research for the use of agricultural historians, other historians, and economists, which we call a bibliography of American agricultural history. We have index cards of all the major work that has been published in the United States relating to agricultural history and a great many references to economic work. This is available to any of you at any time you can use it.

We do basic research in the field of agricultural history which we publish in the form of articles and monographs. We do many staff papers for the Office of the Administrator, for the Office of the Secretary, and for the Congress. The staff papers are usually, as Bush Allin would say, a bit on the dangerous side, and get into a little political science and a little economics and a little history. We don't make very many carbon copies of most of them.

Last night we heard about letters. We get great numbers of letters and we try to give each one considerable attention, because to my mind it is important if a youngster wants to know something about the development of agriculture in the United States. Farmers

are becoming fewer and fewer in proportion to the total population. We have to see that the youngsters and other people have some idea of the development of agriculture in these United States. Something of its past and present importance. So we work pretty hard on these letters.

Now, how can we help you folks? We do have this bibliography of agricultural history. If you get started on some research projects and you want the back literature on it, write us a note, give us a call. We can probably come up with a pretty good reference for you. We are always interested in working with anybody who has a serious interest in agricultural history research or in economic research with a historical background. We have an expert on our staff on the materials in the National Archives.

I understand that we are going to get proceedings of this session. A year from now, I suspect we will all have copies. You will keep them around on your desk for a while. Five years from now some of you will have copies but some of you will be wanting to look back on some of these talks and you will wonder where you can get a copy. Well, write me a note. I am going to be here 20 years from now. We'll have it in our files.

Walsh:

Our second speaker will talk on demography and sociology. He is a graduate of Rutgers University. He received a Ph.D. from American University. He joined BAE in 1935 and has been with the Department since then except for 4 years, 2 of which he spent with the Department of Labor and 2 with the United Nations on assignment in Mexico City. The United Nations recently published a book of his -- "Human Resources of Central America, Panama and Mexico" -- in both English and Spanish. He is author of many publications and articles in the field of agricultural labor, general labor force analyses, and population problems. He received the Superior Service Award from the Department in 1953, and over the years he has served as consultant or member on a number of committees, commissions, and conferences. He is currently bulletin review editor for Rural Sociology. Our distinguished speaker on demography and sociology in relation to economics is Louis J. Ducoff.

Demography and Sociology

Louis J. Ducoff, Economic and Statistical Analysis Division:

A capsule definition of demography is that it is the social science discipline devoted to the systematic study of population change.

In studying these population phenomena, the demographer utilizes a rather highly developed statistical methodology and specialized techniques of analysis. When the demographer extends his research into the determinants and consequences of population trends he enters the area where many other scientific disciplines converge -- sociology, economics, history, political science, human geography and ecology, physical anthropology, and biology. Patterns of fertility, mortality and migration are the ultimate determinants of population change, but these patterns are determined in varying degrees by a host of cultural patterns which range from customs, mores and religious beliefs, to the adaptations of mankind to changes in the economic resource environment and the systems of personal and social values. Thus, with the progress in this and related social science disciplines, population studies have ceased to be merely an accounting system of vital statistics and have increasingly become analytical studies of human resources. The social and economic development and productive utilization of human resources is a goal that unites the demographer, the economist, and the sociologist.

The interest of economists in the 'population problem' goes back to the very beginnings of economic writings and predates what we now know as formal demographic analysis. Malthus, for example, first enunciated his famous principles of population growth in an anonymously published edition in 1798. The storm of controversy raised by the Malthusian formulations on population long outlived him.

Cycles of pro- and anti-population expansion have alternated in the history of economic thought. With the long-time downward trend in fertility that characterized western countries and which reached its lowest levels in the great depression preceding World War II, there was much concern among economists, particularly of the Keynesian persuasion, with the role of the slowing down of population growth on economic stagnation. With the upsurge and rapid acceleration of population growth throughout the world since World War II, and particularly in the underdeveloped countries, the pendulum has swung the other way and national and international policies are being urged in many quarters to slow down population growth if lasting progress is to be achieved in the underdeveloped regions of the world, and even for the developed countries from a longer range point of view.

Population variables both affect and are affected by economic variables. The size of the total population and its growth rate determine the current and prospective size of the consumer market. To agricultural economists particularly, because of the inelasticity of demand for agricultural products, growth of population becomes the major determinant of changes in aggregate demand. The distribution of population and extent of its concentration in certain

areas and city agglomerations importantly affect market locations, production and distribution costs, and determine to a large extent location of manufacturing and service facilities. The age and sex composition of the population, together with its size, are of prime importance in determining the size of the labor force, and this supply of labor in relation to employment opportunities will determine the volume and character of unemployment. The age composition of a population has many economic implications, such as on the structure of demand for goods and services and on the size of the dependent population in relation to the productive population.

On the other hand, there are causal relationships flowing the other way. Per capita income trends affect levels of living and consumption, which in turn influence conditions of health and have a relationship to mortality rates. The functioning of the economy with respect to its degree of fullness of employment, and the prevailing wage and income conditions affect age of marriage, and, together with other factors of a noneconomic nature, have an influence on birth rates and size of family.

Internal migration, its volume and its composition, is a response to push and pull factors in which the economic factors are important. The employment opportunities and wage conditions existing within an area may be so poor that the push factors operate to produce a heavy rate of out-migration. Frequently, however, both push and pull factors operate together to produce the net balance between in- and out-migration from a given area. But here, too, many noneconomic factors enter into the individual decisions of migration versus continuing residence in the area, or whether the migration is within a restricted geographic locale or takes place over a much longer distance.

After the middle of the 19th century and concurrently with the rise of sociology, demography passed increasingly into the hands of social statisticians. Marriage and childbearing particularly were viewed as social phenomena whose incidence of change need to be studied through sociological research, with due consideration to the role of economic conditions. The secular decline in birth rates in the prewar Western world, the postwar boom in fertility, and the phenomena of extremely high fertility in almost every economically underdeveloped country, have greatly intensified joint research by demographers and sociologists into the social-psychological factors affecting birth rates.

Demography and sociology have become closely allied in the study of migration through recognition of the role of social-psychological factors. Demographers have done much to show the major streams and characteristics of migration, particularly through census data. Sociologists have concentrated on interview

studies of particular kinds of migrants, or of migration to or from particular areas, designed to elicit both the social and economic factors causing migration and to study the adjustment process that migrants go through. This work has much relevance to agencies concerned with the farm population, because of the high rate of migration among farm people in recent years.

The widespread interest of the various social science disciplines in urbanization and suburbanization and in changing occupational and educational characteristics of the population has led to intensification of studies of spatial as well as social mobility and the factors underlying them. The demands on population censuses for supplying the necessary data of a wide array of these and other population characteristics have greatly increased. This reflects in part the growing research needs on the part of demographers, sociologists, and economists as well as the many Government and private agencies who are the users of the data.

In contrast to other social science disciplines which deal only with certain aspects of human behavior, sociology attempts to deal with human relationships in their entirety through the scientific study of group behavior and group interaction. Thus, Carl C. Taylor defines sociology simply as the "study of people and their group relationships" and rural sociology as the "study of rural people and their social relationships with one another and with nonrural people." 2/

The sociologist uses the term "social organization" to describe the complex network of patterned human behavior within a society. While these patterns tend to be broadly regular and recurrent, the sociologist also recognizes that they undergo change in response to the internal and external conditions affecting a society's culture. "Culture" in its sociological sense refers to "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society." 3/

Folkways, mores and social institutions are some universal elements present in all cultures. Institutions are defined as "systems of social relationships for meeting various felt human needs." 4/ Economic behavior and economic institutions are

2/ C. C. Taylor, et al. "Rural Life in the United States," Knopf, New York. 1949. p. 4.

3/ From E. B. Tyler, "Primitive Culture," quoted in A. L. Bertrand, Editor, "Rural Sociology," McGraw-Hill, New York. 1958. p. 16.

4/ Alvin L. Bertrand, Ibid., p. 17.

regarded by the sociologist as part of the total culture and interact with other aspects of life. Patterns of human behavior, in their accepted or socially approved forms, are culturally passed on from one generation to another. Sociology thus requires a concept of the human being that goes beyond the biological definition of homo sapiens. Apart from his genetic inheritance, man is a cultural being, the product of group life.

The well-known rural sociologist, Lowry Nelson, has succinctly stated some of the objectives of sociological research: "If we are to understand fully the social life of mankind, we need to know more about the nature of the individual himself, his needs, his drives, his motivation, his attitudes, and all of those subtle and elusive -- though all-important -- forms of covert behavior. What it is that produces the forms of response in individuals and groups, how and why responses differ in time and place, how are folkways and mores changed (e.g., the substitution of one food habit for another); how are value-systems modified; and how can these subtle processes of interaction be measured and described -- these are but a few of the questions involved in the quest for (sociological) knowledge." <sup>5/</sup>

The great surge of research in the social sciences during the past decade or so has led to specialization within the various disciplines. This is true of economics, demography, and it is particularly true in sociology. There are now more than 30 sociological specialties. Rural sociology is one of the older sub-fields of sociology, as it is about a half century old. Work in this field in the Department of Agriculture began in 1919 shortly before the Bureau of Agricultural Economics was created. Some other important areas of specialization in sociology are: Social psychology, industrial sociology, urban sociology, human ecology, and sociometry. There are such subdivisions as political sociology, historical sociology, educational sociology, social stratification, sociology of religion and many other subdivisions. There is a real problem of communication between some of these specialties, as each has developed its own distinctive concepts and frequently its own professional language.

Of even longer standing has been the problem of communication between economics and sociology. The voluminous output of research both in economics and in sociology along with the proliferation of specializations has made it extremely difficult for members of these two professions to become really knowledgeable of each other's research. Nevertheless, progress has been made through

<sup>5/</sup> "Rural Sociology -- Dimensions and Horizons," *Rural Sociology* 10: 131, 1945. Quoted in A. L. Bertrand, op. cit., p. 8.

recognition that basic social and economic problems do require the research contributions of the various social science disciplines. Also, as certain problems continued to receive more systematic study independently by each discipline there has often developed a convergence through the isolation of fundamental factors that lay outside of the particular discipline and more nearly in the province of some other social science approach.

A major criticism of economics made by sociologists stems from the assumption of economic rationality (the economic-man concept) and other abstractions from reality explicit or implicit in classical economic theory.

Sociologists have been particularly irked by the tendency on the part of some economists to treat economic behavior as if it were, for all practical purposes, equivalent to the totality of human behavior, and economic research as about the only worthwhile form of social research. Sociologists have pointed out that non-economic behavior is not necessarily irrational. It may be entirely the expected or predictable behavior in view of the normative pattern or system of values of the society's culture or that of the social group in question. Moreover, sociologists have pointed to the importance of noneconomic factors in the social structure and to the influence of such factors on the economic system. Monocausal explanations of human behavior are rejected by sociologists whether these be Marxian, Freudian, "enlightened self-interest," or other single generalizing philosophy. In the study of social change, an area of major concern to sociologists, they emphasize the principle of multiple causation of social events and of the interdependence of variables in any social system.

Convergence between economic and sociological research has led to contributions to and borrowing from each other's discipline. Institutional economists and sociologists probably owe a good deal to each other. In recent years, economists have also shown concern with social-psychological and attitudinal factors in consumer behavior. The "propensity to consume" and the "propensity to save" and other concepts introduced by Keynes, embody some sociological attributes. Coming down to the present scene, there is a great deal of sociology explicit and implicit in the theory of economic development formulated by Professor W. W. Rostow in his "The Stages of Economic Growth." 6/

In his analysis of the preconditions for takeoff from a traditional agrarian society to a modern economy, Rostow includes a group of noneconomic factors as one of three prerequisites. Among these are such sociological factors as changes in attitudes, value

and social structure. He also criticizes existing economic theory of production and growth as being too rigid and he broadens the demand theory to include social decisions and processes outside of the marketplace. In doing so, he converges to a position long held by sociologists.

We are all aware of the wide interest and extensive programs that now exist on an international scale with respect to social and economic development of underdeveloped areas. Within the United States, we are also concerned with solving problems of lagging economic growth and the persistence of depressed areas, particularly in our rural sector. The challenge to social scientists to make their research contribute to solutions of these pressing problems is great indeed. In this task, collaborative and interdisciplinary approaches must play an increasing role.

(Acknowledgment is made for the suggestions and comments of the following staff members of the Farm Population Branch: C. L. Beale, W. W. Bauder, J. D. Cowhig, W. S. Folkman, and E. G. Youmans.)

Walsh:

Our next speaker is going to give a talk on the subject of econometrics. He is a graduate of the University of Massachusetts, and has an M.A. degree in agricultural economics from the University of Connecticut. He has done further graduate work at the University of Chicago. He started as a cooperative agent with the BAE in Boston in 1948, and came to Washington the following year. He is Head of the Price Research and Methods Section in ESA, where he is responsible for application of statistical methods to economic problems relating to farm economics. Tony Rojko.

Econometrics and Statistics

Anthony S. Rojko, Economic and Statistical Analysis Division:

We have been talking about economic research for the last 3 days. What is this research? First, research is the identification of problems, the relevant elements or variables that enter into these problems or relationships. And, second, a very important step, it includes the measurement of economic relationships to provide qualitative and quantitative answers to these problems.

What is econometrics? It is the measurement of these relevant relationships. And it takes a blend of three disciplines -- mathematics, statistics, and economics -- successfully to achieve measurement of economic relations. What are the interdisciplinary

relationships of these three sciences? To some, mathematics is a shorthand for expressing economic relations. It's a little more than that. I agree with Marshall as to the contribution of mathematics. I will quote him now, "The chief use of pure mathematics in economic questions seems to be in helping a person to write down quickly, shortly, and exactly, some of his thoughts for his own use, and to make sure that he has enough, and only enough, premises for his conclusions." Now this means that mathematics should be used for clarifying and not for confusing.

But economic laws or principles are not so exact as to permit their specifications by mathematics alone, especially since we are dealing with people. Cournot in 1838 recognized that the theory of probability was involved in economic behavior, but he said that at that time it was impossible to give numerical values for contingent events except in questions of mere curiosity such as games of chance. However, the development of regression analysis and its application to economic problems by Henry Moore in the early 1900's and later by Henry Schultz gave a big boost to statistics as a contributor to economic analysis. The research could use this concept of probability and get around the difficulty that economic laws were not exact. We are fortunate that economic principles are based on postulates and are not inevitable truths. This permits us as statisticians to accept findings that do not agree with our postulates. We can always change our postulates, while changing a "truth" would be embarrassing.

Now what about the third ingredient -- economic theory? The lack of this ingredient in the discussion, I believe, was disturbing Winn Finner when he asked how do we know when to accept results when we add 20 or 30 variables to the statistical analysis. This also disturbed Haavelmo and others in the early 1940's when regression analysis became an end in itself and the analyst was throwing everything but the kitchen sink as variables into the regression. We need the theory to test the empirical results.

Let us look at the potential of maintaining a proper interdisciplinary relationship between these three sciences. In the first place, I think we ought to look upon econometricians as partners in research. They work along with economists developing theory as well as testing it. Here I define theory to include operational theories as well as the formal theory of the whole structure. By operational theories I mean analytical tools such as the cobweb theory used by Ezekial in the 1930's. Here is something that is simple and easy to understand. Yet it provides specific answers to a problem. And research should provide answers as well as providing an understanding as to how the economic system operates. In fact, too often econometricians and other researchers often like to limit their research to the latter. One advantage of developing large models of the latter

type is that standard statistical tests as to the goodness of the model often do not pinpoint all the weaknesses inherent in the model. For example, suppose you have 20 equations and these equations have 100 coefficients. If you obtain 80 of the 100 coefficients that are statistically significant, is this good? It is 80 percent correct. But this isn't good enough for solving problems when using research as a tool for decision making.

In closing, there are several points I want to call to your attention. One is that econometric research is not limited to one or two areas of research. ESA is not the only division that is doing econometric research. We certainly need to continue it there with such work as filling in the blocks of Rex Daly's large projection model with quantitative answers. But let me say that farm economics work can also be econometric research. If linear programming models are to be operational, they will also have to take on the attributes of statistical probability. The same is true in marketing economics, especially if one is studying changes in market structure. Some work has been done in this direction. The use of Markov chains to measure changes in structure is an example. Here again is another operational tool to observe how the structure of industry is changing. I am sure we could also find examples in the foreign analysis divisions.

I want to close with this plea. We have a problem of communication. What I think ERS needs is the recognition that there are different levels of econometricians. On the one extreme are the highly sophisticated mathematical statisticians while on the other extreme are the economists who must deal with numbers. We should not expect communication between the extremes. But we should encourage communication between levels that have some bases in common. Only some need to understand the mathematician. They in turn should be understood by others. This chain continues until an understanding of econometric work gets down to each and every one of you.

Walsh:

Our final speaker on this distinguished panel comes from Oklahoma. He has a farm background in Utah, Colorado, Oklahoma, and Kansas. He has an A.B. degree from the College of Emporia, Emporia, Kansas; he studied philosophy at the University of Chicago. He was an instructor in philosophy and history at Columbia University, where he received his Ph.D. in philosophy in 1936. From 1936 on, except for one year, he has been with the Department. He received the Superior Service Award in 1954. Three times he has won the award for the best publication of the year in the Journal of Farm Economics -- in 1945, 1950, and 1959. It might be useful to recall the titles of these papers to

indicate how he applies his philosophical training to economic problems. The first one was "Farm Technological Advance and Total Population Growth." The next was "The Machine Process in Agriculture and Industry." And the last award-winning paper was "The Impact of Technical Advance and Migration on Agricultural Society and Policy." Today he will talk on relationships between economics and ethics. John Brewster.

### Philosophy and Ethics

John M. Brewster, Farm Economics Division:

#### I. Ethical Neutralism of Economics

I don't need to say very much about economics -- the nature of it -- as you are all economists. As I understand it, economics is ethically neutral. In using this term, people often say to me, "What in the name of sense, John, do you mean by ethically neutral?" So, let's make a few observations on that point.

When you are not ethically neutral you take some position about what ought and ought not be done for the good of the world. It may be only the little world of your family, involving a daughter's questionable boy friends; it may be a PTA committee; or it may be something about the supply-management situation in agriculture. If you are not ethically neutral in these situations, you are an advocate of something. You are taking some position on what ought and ought not be done for the good of the world.

But you never act this way as an economist. As I understand economic theory, its basic concepts and processes of measurement, it is ethically neutral. As citizens we are partisans, we take sides; but not as economists. We should be very happy about the fact that economic theory and measurement is ethically neutral. For when you get into conflicts over what ought and ought not be done for the good of the world, we do need some kind of concepts and processes of measurement that quantify results of alternative actions, and thus give us data we need to take account of in our struggle to make up our mind on what ought and ought not be done on specific issues.

The economist couldn't get along without his concept of satisfactions, but as used by him this concept has no ethical significance; it merely involves greater or lesser quantities of satisfactions. Whiskey is better than poetry if it generates a greater quantity of satisfactions.

In line with this quantitative or ethically neutral meaning of satisfactions, we carry two strictly economic images of welfare in our heads. On the production side, we have the efficiency image

according to which the nation produces the greatest possible output of want-satisfying goods in the degree that it apportions all its manpower and other resources among different employments so that similar services receive similar rates of pay throughout the whole economy. But when the want-satisfying goods are produced, the question arises as to how to distribute them in ways that will yield the greatest possible quantity of actual satisfactions. In line with this question, we have a distribution image of efficiency according to which it is commonly held that the more equally a nation distributes a given quantity of output from its economy, the greater will be the quantity of satisfactions it will realize therefrom.

There is nothing ethical about either of these efficiency images; they merely function as guides to ways of generating the greatest quantity of satisfactions, irrespective of their differences in kind. But the kinds of satisfactions people most want are the very heart of ethical issues. For example, the issue of a daughter's questionable boy friends usually doesn't turn on the quantity, but the quality of satisfactions involved.

As an analyst, the economist is quite neutral about such matters. For example, suppose you changed Las Vegas into a retreat for ministers; that would have quite an effect on the relative prices of slot machines and Bibles in that particular area of the country. But whether this is a good decision or a bad decision is of no concern to the economist. In either case he would use precisely the same equations for determining changes in the relative prices of Bibles and slot machines. Relative to ministers, Bibles might yield the same quantity of satisfactions as would slot machines relative to gamblers. In which case, the economist as a craftsman would point out that the shift in demand for Bibles and slot machines had not the slightest effect on the gross national product. Whether or not people want more Bibles or more slot machines is of no concern to the economist, but as a citizen -- an ethical animal -- he might be greatly concerned over their choice.

Look at the ethical neutralism of economics from another angle. In everyday talk we often divide all life into noneconomic and economic activities, saying economic activities are the ones done for pay, and that noneconomic activities are the ones done without pay. Then we go on to equate economics with nonethical or materialistic activities, and all ethical values with non-economic or "spiritual" activities. This won't do.

The foundation axiom of economic theory is the presupposition that men seek to act in ways that will maximize their satisfactions. In line with this axiom the term economics means simply rational accomplishment of given purposes with the least possible expenditure of limited means; time, energy, personal capacity, and other

resources. Thus, any activity is economic to the extent that it is accomplished in this way, irrespective of whether it be done with or without pay and also irrespective of the kind of goods or services yielded, whether a poem, a prayer, a painting, a pair of shoes, or an ear of corn. By the same token any activity is noneconomic to the extent that it involves waste of means for achieving its objective.

Thus, every phase of life from the cradle to the grave is economic or noneconomic, depending on whether it is characterized by a rational or wasteful use of limited means for given purposes. This scientific meaning of the term economics permits no physical separation of life into a sphere of economic employments on the one hand and noneconomic employments on the other. There is no room for such dichotomies in scientific thought, although they flutter around in common sense discourse like crows in a cornfield.

Well, so much for what I mean by the ethical neutrality of economics.

## II. Man as an Ethical Animal

Now I turn to ethics for a moment. Aristotle defined or referred to man as a political animal. With equal accuracy he might have defined him as an ethical animal. By this we mean that the dominant drive of men the world over is for acting in ways that justify a favorable image of themselves in their own eyes and the eyes of others. This drive -- the ethical motivation -- is universal. It is common to the primitives of the islands of the sea, to slick-word artists of Madison Avenue, and to all of us in this room. The prime concern of any human creature is achieving an image of himself that is pleasing to live with, and his aversion to a distasteful self-image. This generic striving for us all is an ethical motivation. It concerns the kind of a person you are, and the kind you aspire to be and feel responsible for being. (The same logic applies here to a group as to the individual.)

Now, I said this the other day to a gentleman; he looked at me as if I were an easy Joe who doesn't know the facts of life, and said, "You are an optimist who believes in the goodness and perfectability of man." Nothing could be further from the truth.

The fact that each strives for a favorable image of himself doesn't mean that he is a good man. I suppose that few would disagree that Hitler and Goebbels were among the evilest men of all time. Read their unspeakably evil deeds in Shirer's "Rise and Fall of the Third Reich." Yet, the last thing Hitler did before blowing his head off was to affirm his personal faith that history would pass a favorable judgment on him. He could neither live nor die without his inward assurance of a favorable judgment in

history. The same was true of Eichmann, who sent 6 million Jews to the gas chambers. Going to the gallows the other day, his last words were, "I have been correct. I did my duty. I had to follow my flag and the laws of war."

The need of a favorable image of oneself in the eyes of himself is just as great a need as the favorable image of himself in the eyes of others. Sometimes I refer to this striving as the status principle. That is all right, but usually we just equate status with the striving for a favorable image of yourself in the eyes of others. That overlooks the most important member of your whole audience, which is yourself.

Now life would be wonderful if the same line of action always generated both the favorable self-image which one seeks in his own eyes and also the favorable image which he seeks of himself in the eyes of others. Then we would never have any ethical problems.

### III. The Nature of Ethical Problems

Life gets tough when you get real ethical problems. This arises whenever the line of behavior you often feel obliged to follow in order to justify a decent image of yourself in the eyes of others is opposite to the line of behavior you feel you must be obliged to follow if you get a decent image of yourself in your own eyes. This conflict brings up for decision the kind of person you are going to be; the kind of country, family, or community we most seek to have and be.

Men the world over share the striving for a favorable image of themselves in their own eyes and the eyes of others. But they differ as night from day with respect to their beliefs concerning what way of living and making a living is the *prima-facie* evidence that one possesses the qualities of mind or character that most deserve high standing, emulation, and esteem.

I want to give you an illustration. It is about the Tasmanians -- a primitive people of one of those Pacific islands. For generations they lived, reared their children, and guided their own feet by the belief that proficiency in scalping and headhunting were incontrovertible evidence that one possesses the qualities of mind and character that deserved high standing -- a good image of oneself. Then the Westerners came and suppressed the bloody practice without giving any substitute test of merit. Now let me quote what happened when the Westerners did that. "They cut the root of the religious life of the native. They no longer knew how to propitiate their gods. Their religion was undermined. They grew apathetic, indifferent to work and the future, and at the same time so proficient in abortion that the tribe was committing suicide by depopulation." So they took seriously the belief that

headhunting and scalping was the proper evidence that one possesses the kind of character that entitles him to a decent self-image. Without a widely accepted test of merit, personality simply disintegrates into a welter of anxieties over the meaning and purpose of life.

I could give all sorts of illustrations. What I am getting at is that any civilization rests upon basic beliefs and value presuppositions concerning what ways of living and making a living they must follow with proficiency if they are to justify a good image of themselves in their own eyes and the eyes of others.

Take an illustration that involves our own profession. Economists are always talking about so-called materialistic income incentives as sure-fire inducers of greater productive effort. If we just offer people some more money they will work more. Well, in our culture that is pretty true. But there is a lot of cultures in which it isn't true. Take the medieval landlord civilization out of which modern America and Europe emerged. One of its foundation beliefs was that exemption from economic work was *prima-facie* evidence that you possessed superior qualities of mind and character that entitled one to high standing, made him a man of caliber. Conversely, dependence upon economic work was deemed *prima-facie* evidence that you are an inferior character. Now under those ethical presuppositions, the way you maximize satisfaction is to do only enough work to sustain and support your customary wants so as to have the greatest possible amount of time for leisurely activities -- coon dogs, festivals, and picnics, and all that sort of thing.

Now in the beginning of our modern society, the reformation movement turned this old belief into the modern belief that proficient work and industry are *prima-facie* evidence of an upright man. When we got that belief in our culture, so-called economic incentives became inducers of productive effort over and above any conceivable level of customary wants. The point is that the effectiveness of materialistic income incentives for productive work presupposes a fundamental ethical judgment concerning what constitutes evidence of a good image of yourself.

Now take a look at the question of freedom, which the economist is always getting involved in. I would suggest that no whiff of wind between the teeth is so devoid of meaning as the word freedom until you get specific concerning the ill that you want most to get rid of.

Consider a few illustrations. Social security was quite an issue in the 1936 campaign. The issue revolved around the word "freedom." There was a famous placard that you often found in places of business and public establishments. On the right hand side of the placard was a picture of a man behind prison bars.

Across his back in big type was his prison number. On the left hand side was a social security number. The implication was that if we passed the social security legislation we would turn the whole Nation into one gigantic jail. The placard posed a bogus issue -- for the actual problem was the ill from which they most wanted liberation. A lot of people were hurting from agonizing economic insecurities. They wanted to get rid of this malady. They wanted to do so through a rule which limited the hitherto unrestrained privilege of the individual to spend all his pay check as he pleased. For under the social security proposal, the Government would siphon a certain percentage of one's current income into the Treasury with the understanding that it would return him a certain income when he reached a certain age and in this way liberate all the people from agonizing insecurities that were striking so many in their later years.

As we look back now, the general judgment is that through placing a collective restraint on unrestrained individual action we gained a new liberty. We gained a liberation from the malady of economic insecurity, and that liberty was more valuable to us than the previous liberty just to spend all one had on whatever one pleased.

The point I am getting at is that in the struggle we had an ethical conflict between two meanings of freedom. One was freedom from any collective restraint on the individual's absolute power to spend all his income as he pleased. This cost of his freedom was economic insecurity. The other freedom was liberation from economic insecurity. The cost of this liberty was a small loss of absolute power to spend his income as he pleased. Which kind of liberation did they most want? Until they made up their minds on which of these liberties was more valuable to them, they had no clear idea of what they meant by the word freedom.

For years we have been up against the same kind of situation in farm policy. Conditions, which we need not enumerate here, result in the fact that year after year farmers with unrestrained power to produce whatever they choose, turn out more output than the market will take at what they call a reasonable or fair price. In this way, the cost-reducing benefits of their increasing productivity is siphoned off to the rest of society, and farmers don't share much in it. This violates their sense of equity. Supply-management programs are proposed as means of achieving liberation from this malady. But the price of this liberation is collective restraint on the hitherto absolute power of farmers to run their business as they choose. Both liberations are valuable. But the price of one is some loss of the other. Do farmers most seek to be persons who receive fair prices at the expense of their absolute power to farm as they choose? Or do they most seek to be persons who enjoy this power but suffer low prices because of it? Which of these self-images do they most prize? That is the

real issue. Otherwise expressed, the issue is not a question of the democratic freedom of each to have an equal voice in laying down the rules; rather the issue is from which malady does the farmer most want to be liberated: (1) Does he prize most a democratic order that places some restraint on farming as he pleases in order to permit him to receive an equitable share of the benefits of his increasingly superior industry? (2) Or does he want most a democratic order that deprives him of a fair share of rewards, but leaves undisturbed this privilege to farm as he pleases? Either choice is consistent with our democratic creed.

Whichever policy they choose, farmers will remain a free people. If they choose to handle their excess productive capacity through democratically established and effective supply-management programs, they will enjoy liberation from economic conditions that preclude them from sharing equitably in the cost-reducing benefits of their increasingly superior industry. If, on the other hand, they choose to take whatever the market offers them for their goods and services, they will enjoy liberation from some democratically imposed restraints on their prerogatives to run their businesses as they like.

From which of the maladies do they most seek liberation? This is the hard question. Both liberties are treasures but the cost of one is some sacrifice of the other. That is the real issue. And it is an ethical issue in the profoundest sense of the word.

#### IV. How Economics Helps Resolve Ethical Issues

This is one of the ethical aspects of the farm problem. It is not the job of economists to say what the farmers' choice should be. But it is his job to quantify and to measure the results of alternative ways of reacting to the farm surplus situation. In this way, the technician provides indispensable data which people want and need to have in making up their minds on which policy alternative they deem most worth while. As scientists, you measure and you quantify the results of this line of action or that line of action. That is what you do as economists.

Now, as a citizen, as a person, you reach your own ethical judgments. But we need to distinguish between our role as an ethical agent and our role as a craftsman. As citizens, we take sides, become advocates of this or that; but as craftsmen we are ethically neutral, and must be if we get the data, get the facts, which people want to take into account in reaching their decisions as to what ought and ought not be done for the good of the world.

Discussion

Walsh:

We have about 10 minutes which we can devote to questions.

Lazar Volin:

I don't have a question, I have a comment. It seems to me that when he spoke about freedom, he had an absolute concept of freedom.

Brewster:

I must have failed to make myself clear. The one thing that I do not have is any absolute concept of freedom. I said in the beginning that there is no whiff of wind between the teeth so meaningless as the word freedom until you pin down the specific ill from which you most want liberation. Now lots of folks define freedom as the mere negation of collective rules and restraints on individual action.

Now that is an absolute. I will add one other thing. These absolutes are terrible things. They make devils of us. This negative meaning of freedom is completely opposite to the meaning of freedom in our democratic creed. In that creed, the hallmark of free men is not a negation of collective restraints but the right and the privilege to have a voice in laying down the rules that all must observe for the sake of the common good. I call that a positive meaning of freedom. Your freedom lies in the right to participate in making the rules.

One of the unfortunate things you run into is a strong tendency to equate the total meaning of freedom with the mere absence of collective restraints. And in any proposed legislation that offers you a collective rule to liberate you from some ill, they say that's serfdom, that's creeping socialism. In reaching this policy attitude one equates the total meaning of freedom with this mere negation of restraint. When you do this, you don't need any more facts. You don't need to analyze anything else at all because the greatest of all facts is already in. Total good is at war with total evil. Then the solution to your problem no longer requires analysis and search for facts concerning the relative merits and demerits of competing goods. It's a choice between total evil and total good. All that you've got is a volitional problem; for the head is absolutely sure what action is right, and what is wrong. All that you need if you've got total freedom against total serfdom is to generate enough righteous fervor to get yourself on the side of right against evil. That's what happens when you guide yourself with absolutes.

E. H. Wiecking:

We are talking about interdisciplinary work. One of the main embodiments of collective restraint of which our whole history is full is law in legal institutions. I would like to make the comment that the Economic Research Service, or certain portions of it, is heavily engaged in research in this whole field of law and economics, which are so intimately related. That is interdisciplinary. You have an example of it here in this room; you can't buy 'em so you raise 'em. Neil Harl, who got the Order of the Coif as a lawyer, is now getting his Ph.D. in economics at Ames on a linear programming problem, expects to be the first lawyer trained in econometrics. Also, in the field of political science, in economics, our work in rural government, and taxation, resource districts, and things of that kind, also we have this very desirable type of vigor which comes from interdisciplinary action between the social sciences. I won't argue the point that law is a science, economics a science, political science is a science; I leave that to others to decide. But in actual practice they are working together on these problems. I thought that ought to be mentioned. Other interdisciplinary activities are going forth -- economics and hydrology engineering, economics and soil, and things of that kind, in case you weren't aware of it.

Walsh:

Thank you, Ernie; we were confining ourselves, however, to economics and other social sciences.

It is my pleasure at this time to turn the podium and the microphone back to Nate Koffsky who will have a final word on this conference.

## A SUMMING UP

Koffsky:

It is now time to close this first Washington-Field Conference of ERS. I believe that we have accomplished our purposes in having this meeting -- to meet one another in the context of our new organization, to understand what each of us is doing, and to appreciate each other's problems. We have discussed the total research program of ERS and we have looked ahead to the challenges to ERS in a world which changes rapidly.

As part of the summing up, let me emphasize again the forces which are shaping the ERS program. First, the accelerating use of research as a tool for decision-making. Economic analysis is being used as a basis for vital decisions in farm policy. This is as it should be, and as economists we are happy to contribute more effectively in this respect than ever before. We have a major challenge here in terms of expanding our research base so as to provide the research building blocks which lead to better decision-making. It is not enough to say in 4 or 5 years we will have completed a piece of research which will enable us to provide an answer to a particular problem. The time is foreshortened and we must drive toward developing answers to emerging problems much sooner than we have been accustomed to.

Second, in a large sense we know the direction of farm policy much clearer now than we have in the past. We can design our research program to meet the needs of that direction. At the same time, because it helps shape farm policy, it accentuates the need for more accurate research, and underlines the urgency of our research results.

Third, we have paid attention to the rapid change in the structure of agriculture. It is clear that our tasks are wider than agricultural economics defined in the narrow sense. There are the problems associated with rural development and those associated with helping underdeveloped economies on the road to economic growth. Our horizons are widening and it is clear that much of what the Economic Research Service does cuts across interdisciplinary lines.

I hope that you in the field do not feel that you are an FED man, or an MED man, or an ESAD man. You are the representative of the Economic Research Service and we must find ways to make that more meaningful. This is not a one-way road. You also have a responsibility to see that your work is meaningful and that we in Washington receive the benefit of your forward thinking. Let us both try to be more responsive to each other's needs.

Last night at the dinner I presented the Economic Research Service to the Under Secretary as the best economic research organization in the world. Further, I would say ERS is better this year than last and I would expect it to be better next year than this year. This is a changing world and we need to change to keep up with the challenges it poses. As we go, we will need to keep a living organization and continually redirect our efforts. But out of it all we will have a better ERS.

## THE BANQUET

A banquet, following the social hour, was held the evening of June 12, with Charles F. Kiefer as master of ceremonies.

The banquet program featured these "10-minute commentaries":

Raphael V. Fitzgerald, Assistant Deputy Administrator,  
ASCS "Action Programs and Economic Research"

Erwin C. Elting, Deputy Administrator, ARS  
"Strengthening ARS-ERS Cooperative Relationships"

Irwin R. Hedges, Assistant Administrator, FAS "Foreign  
Programs and Research Needs"

Charles S. Murphy, Under Secretary of Agriculture  
"The Challenge to Economists"









